APPENDIX D: WETLAND VALUE ASSESSMENT

U.S. Fish and Wildlife Service, Ecological Services
200 Dulles Drive, Lafayette, LA 70506
(337) 291-3100, FAX (337) 291-3139

MEMORANDUM

DATE: July 15, 2020

TO: U.S. Army Corps of Engineers (NOD)

FROM: U.S. Fish and Wildlife Service (Service)

SUBJECT: Project Information Sheet for the Bottomland Hardwood Wetland Value Assessment (WVA) for the proposed East Baton Rouge Parish Flood Risk Management Project, Clearing and Snagging of Lower Bayou Fountain, Lower Jones and Lower Ward Creeks.

The proposed East Baton Rouge Parish Flood Risk Management Project consists of clearing and snagging a total of approximately 11.5 miles of streambed across the Lower Bayou Fountain (LBF), Lower Ward Creek (LWC) and Lower Jones Creek (LJC) waterways in East Baton Rouge Parish, Louisiana. Approximately 9.7 acres of BLH forest would be impacted

The USACE-certified Wetland Value Assessment (WVA) Bottomland Hardwood Model (version 1.2) as well as the Hurricane and Storm Risk Reduction System (HSDRRS) for BLH mitigation [LPV & WBV]Mitigation Assumption Guide (Revised/Updated: 3 March 2012) were used to evaluate impacts. Target Years (TY) were set as follow: 0, 1, 20 and 50.

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WVA's were broken down by site and staging area (SA). If staging areas were in close proximity to one another, had similar habitat type and surrounding land use, they were lumped together and a single WVA was performed on the site.

Lower Bayou Fountain:

1. Staging Area 1 = 1.0 acres of BLH impacted
2. Staging Area 2 = 0.50 acres of BLH impacted

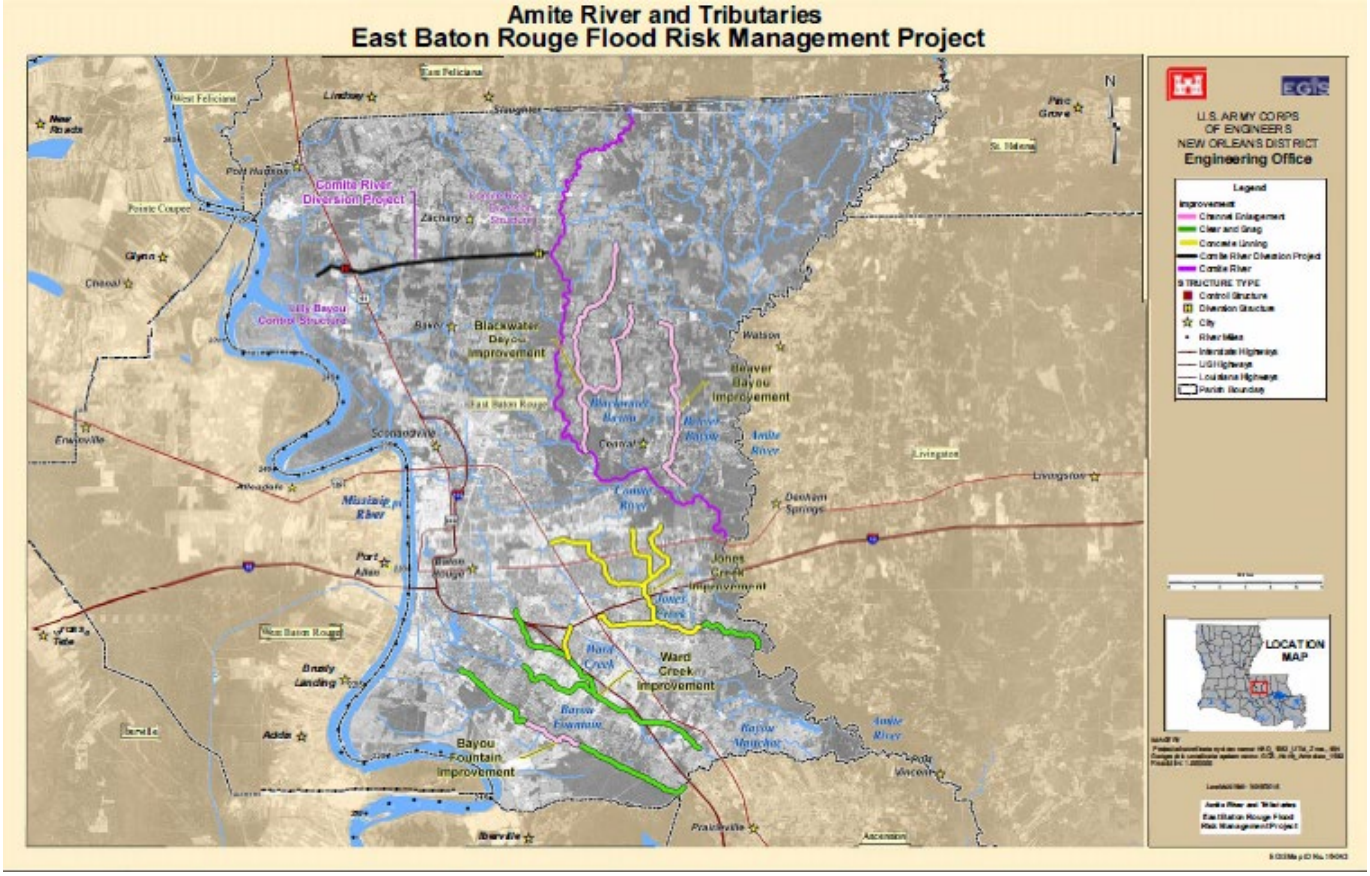
Lower Jones Creek:

1. Staging Area 1 = 2.0 acres of BLH impacted
2. Staging Area 2&3 = 2.0 acres of BLH impacted

Lower Ward Creek:

1. Staging Area 1&2 = 1.50 acres BLH impacted
2. Staging Area 3 = 1.87 acres BLH impacted
3. Staging Area 4 = 0.83 acres of BLH impacted

Figure 1. Amite River and Tributaries



Variable V_1 – Tree Species Association

FWOP- Due to the inability to perform field work at this time, all proposed staging sites were assigned a Class 5 through all FWOP target years. The land cover is not expected to change.

Class 5: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 20% of the canopy.

FWP- Proposed planting would consist of a mix of 60 percent hard-mast producing species and 40 percent soft-mast producing species. It is assumed that this species composition will remain static over the length of analysis. Plantings will occur in TY1 post construction. All tress will be approximately 1 year of age at initial planting. It is assumed that a Class 5 composition will be achieved at year 20 and will remain constant for all subsequent target years. FWP class levels were determined as follows for each TY:

TY 0 - Class 1
TY 1- Class 1 (Planted seedlings are 1 year old at the time of planting.)
TY 20- Class 5 (Planted trees are 20 years old.)
TY 50- Class 5 (Planted trees are 50 years old.)

Variable V_2 – Stand Maturity

FWOP- Due to the inability to perform field work at this time, it is assumed that the average age of canopy-dominant and canopy-codominant trees is 50 years old or greater. An age of 50 (when maximum SI = 1.0 is achieved) was entered for all target years for FWOP (except LJC SA 1).

Lower Jones Creek Staging Area 1 was last cleared in 2002 and therefore could be aged accordingly.

Lower Jones Creek Staging Area 1:

TY 0 - Age 18
TY 1 - Age 19
TY 20- Age 39
TY 50- Age 69

FWP- Stand maturity is based upon the average age or dbh of canopy-dominant and canopy-codominant trees. For the FWP scenario, the ages are set as follows:

TY 0 - Age 0
TY 1 - Age 1 (Planted seedlings are 1 year old.)
TY 20 - Age 20
TY 50 - Age 50

Variable V_3 – Understory/Midstory

FWOP- Due to the inability to perform field work at this time, HSDRRS assumptions for a 50-year old site were applied to all locations for all target years (except LJC SA 1).

TY 50 - Understory = 35% // Midstory = 30%

Since stand maturity was established for the Lower Jones Creek Staging Area 1, HSDRRS assumptions were applied using a linear relation to establish the understory/midstory coverage of the site.

Lower Jones Creek Staging Area 1:

TY 0 – Understory = 33% // Midstory = 54%
TY 1 – Understory = 29% // Midstory = 57%
TY 20 – Understory = 31% // Midstory = 41%
TY 50 – Understory = 35% // Midstory = 30%

FWP- Standard HSRDRSS assumptions were applied to all sites as follows:

TY 0 – Understory = 0% // Midstory = 0%
TY 1 – Understory = 100% // Midstory = 0%
TY 20 – Understory = 25% // Midstory = 60%
TY 50 – Understory = 35% // Midstory = 30%

Variable V_4 – Hydrology

FWOP- Due to hydric soil, site elevations and historic records of seasonal flooding, all locations (TY0-50) were classified as follows:

Flooding Duration= Moderate and Flow/Exchange= Seasonal.

FWP- Site alternations such as clearing, felling, trimming, and cutting of trees and other vegetation designated for removal, could improve overall habitat. Conditions are expected to remain constant.

FWP conditions are as follows: Flooding Duration= Moderate and Flow/Exchange= Temporary.

Variable V_5 – Size of Contiguous Forested Area

FWOP-Corridors over 75 feet wide constitute a break in the forested area contiguity and are considered fragmented. Tracts >500 acres in size are optimal.

Class 1	0 to 5 acres
Class 2	5.1 to 20 acres
Class 3	20.1 to 100 acres
Class 4	100.1 to 500 acres
Class 5	> 500 acres

Sites varied in size of contiguous forested area. Some sites had optimal contiguity, offering higher quality habitat. While other sites lacked forested habitat and created a fragmented nature of the surrounding land cover. Conditions are assumed to remain constant throughout all target years.

FWOP conditions are as follows:

Lower Bayou Fountain SA 1: Class 5
Lower Bayou Fountain SA 2: Class 5

Lower Jones Creek SA 1: Class 5
Lower Jones Creak SA 2&3: Class 5

Lower Ward Creek SA 1&2: Class 3
Lower Ward Creek SA 3: Class 1
Lower Ward Creek SA 4: Class 4

FWP- Sites are considered "forested" when trees have reached 20 years of age. If existing habitat conditions and surrounding land cover remain unchanged, then following classes will be achieved at year 20 and will remain constant for all subsequent target years:

Lower Bayou Fountain SA 1: Class 5
Lower Bayou Fountain SA 2: Class 5

Lower Jones Creek SA 1: Class 5
Lower Jones Creak SA 2&3: Class 5

Lower Ward Creek SA 1&2: Class 3
Lower Ward Creek SA 3: Class 1
Lower Ward Creek SA 4: Class 4

Variable V_6 – Suitability and Traversability of Surrounding Land Uses

To measure the effects of surrounding land use, a 0.5 mile buffer was created around the perimeter of the site polygon. Utilizing Google Earth imagery, visual estimates were used to determine the percentage of land use. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP.

Lower Bayou Fountain SA 1:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	35%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	10%
Active agriculture	15%
Non-habitat: linear, residential, commercial, industrial development, etc.	40%

Lower Bayou Fountain SA 2:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	65%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	19%
Active agriculture	2%
Non-habitat: linear, residential, commercial, industrial development, etc.	14%

Lower Jones Creek SA 1:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	20%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	5%
Active agriculture	5%
Non-habitat: linear, residential, commercial, industrial development, etc.	70%

Lower Jones Creek SA 2&3:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	30%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	0%
Active agriculture	10%
Non-habitat: linear, residential, commercial, industrial development, etc.	60%

Lower Ward Creek SA 1&2:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	15%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	25%
Active agriculture	5%
Non-habitat: linear, residential, commercial, industrial development, etc.	55%

Lower Ward Creek SA 3:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	20%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	25%
Active agriculture	5%
Non-habitat: linear, residential, commercial, industrial development, etc.	50%

Lower Ward Creek SA 4:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	20%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	25%
Active agriculture	5%
Non-habitat: linear, residential, commercial, industrial development, etc.	50%

Variable V_7 – Disturbance

The effect of disturbance is a factor of the average distance and the type of disturbance and therefore both are factored into the SI formula. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP.

Distance Class	Disturbance Type Class
Class 1. 0 to 50 ft.	**Class 1.** Constant/Major. (Major highways, industrial, commercial, major navigation.)
Class 2. 50.1 to 500 ft.	**Class 2.** Frequent/Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats).
Class 3. > 500 ft.	**Class 3.** Seasonal/Intermittent. (Agriculture, aquaculture.)
	Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of way).

Lower Bayou Fountain SA 1: Distance Class 2 and Type Class 2
Lower Bayou Fountain SA 2: Distance Class 2 and Type Class 2

Lower Jones Creek SA 1: Distance Class 2 and Type Class 2
Lower Jones Creak SA 2&3: Distance Class 2 and Type Class 2

Lower Ward Creek SA 1&2: Distance Class 1 and Type Class 2
Lower Ward Creek SA 3: Distance Class 1 and Type Class 2
Lower Ward Creek SA 4: Distance Class 1 and Type Class 2

Project Impact Summary

Lower Bayou Fountain SA 1

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	0.87
B. Future With Project AAHUs =	0.59
Net Change (FWP - FWOP) =	**-0.28**

Lower Bayou Fountain SA 2

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	0.45
B. Future With Project AAHUs =	0.31
Net Change (FWP - FWOP) =	**-0.14**

Lower Jones Creek SA 1

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	1.51
B. Future With Project AAHUs =	1.13
Net Change (FWP - FWOP) =	**-0.38**

Lower Jones Creak SA 2&3

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	1.71
B. Future With Project AAHUs =	1.16
Net Change (FWP - FWOP) =	**-0.55**

Lower Ward Creek SA 1&2

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	1.17
B. Future With Project AAHUs =	0.79
Net Change (FWP - FWOP) =	**-0.37**

Lower Ward Creek SA 3

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	1.37
B. Future With Project AAHUs =	0.93
Net Change (FWP - FWOP) =	**-0.44**

Lower Ward Creek SA 4

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	0.67
B. Future With Project AAHUs =	0.45
Net Change (FWP - FWOP) =	**-0.21**

APPENDIX D: WETLAND VALUE ASSESSMENT

U.S. Fish and Wildlife Service, Ecological Services
200 Dulles Drive, Lafayette, LA 70506
(337) 291-3100, FAX (337) 291-3139

MEMORANDUM

DATE: September 25, 2020

TO: U.S. Army Corps of Engineers (NOD)

FROM: U.S. Fish and Wildlife Service (Service)

SUBJECT: Project Information Sheet for the Bottomland Hardwood Wetland Value Assessment (WVA) for the proposed East Baton Rouge Parish Flood Risk Management Project, Clearing and Snagging of Lower Bayou Fountain, Lower Jones and Lower Ward Creeks.

The proposed East Baton Rouge Parish Flood Risk Management Project consists of clearing and snagging a total of approximately 11.5 miles of streambed across the Lower Bayou Fountain (LBF), Lower Ward Creek (LWC) and Lower Jones Creek (LJC) waterways in East Baton Rouge Parish, Louisiana. Approximately 100 acres of BLH forest would be impacted by clearing the proposed projects footprint.

The USACE-certified Wetland Value Assessment (WVA) Bottomland Hardwood Model (version 1.2) as well as the Hurricane and Storm Risk Reduction System (HSDRRS) for BLH mitigation [LPV & WBV]Mitigation Assumption Guide (Revised/Updated: 3 March 2012) were used to evaluate impacts. Target Years (TY) were set as follow: 0, 1, 20 and 50.

WVA models were previously performed for the East Baton Rouge staging areas. This supplemental PIS addresses additional impacts associated with the clearing and snagging of the right of ways (ROW) in the project vicinity.

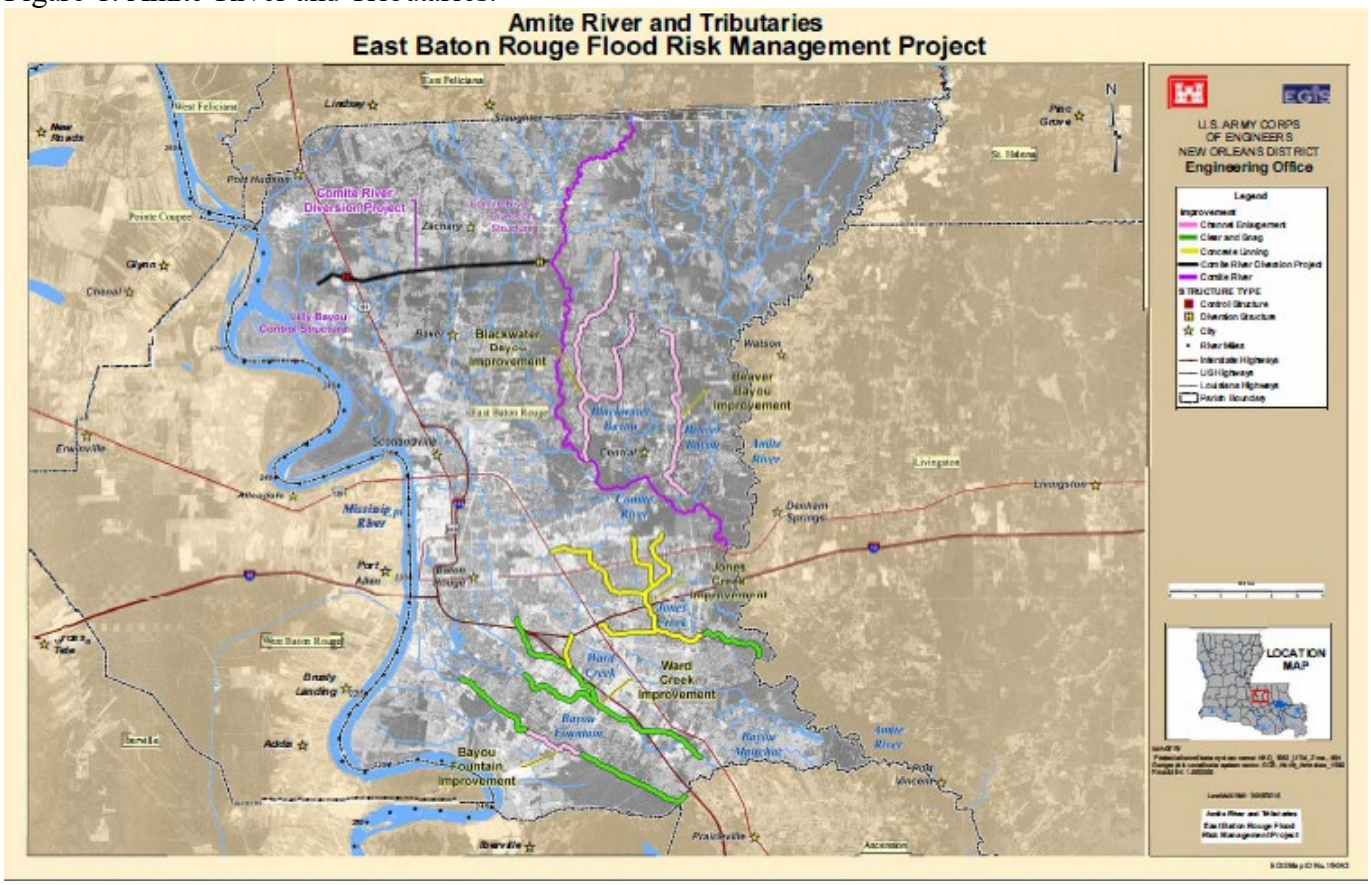
Project associated impacts:

Lower Bayou Fountain:
Footprint = ~ 37.0 acres of BLH impacted

Lower Jones Creek:
Footprint = ~32.0 acres of BLH impacted

Lower Ward Creek:
Footprint = ~31.0 acres BLH impacted

Figure 1. Amite River and Tributaries.



Variable V_1 – Tree Species Association

FWOP- Due to the inability to perform field work at this time, all proposed staging sites were assigned a Class 5 through all FWOP target years. The land cover is not expected to change.

Class 5: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 20% of the canopy.

FWP- The clearing of the ROW will be maintained through all target years; therefore, it is assumed that a Class 1 composition will remain constant.

Variable V_2 – Stand Maturity

FWOP- Due to the inability to perform field work at this time, it is assumed that the average age of canopy-dominant and canopy-codominant trees is 50 years old or greater. An age of 50 (when maximum SI = 1.0 is achieved) was entered for all target years for FWOP.

FWP- Stand maturity is based upon the average age or dbh of canopy-dominant and canopy-codominant trees. The clearing of the ROW will maintained through all target years; therefore, it is assumed that an age Class 0 will remain constant.

Variable V_3 – Understory/Midstory

FWOP- Due to the inability to perform field work at this time, HSDRRS assumptions for a 50-year old site were applied to all locations for all target years.

TY 50 - Understory = 35% // Midstory = 30%

FWP- The clearing of the ROW will maintained through all target years; therefore, it is assumed that 100% understory will remain constant.

TY 0 – Understory = 100%
TY 1 – Understory = 100%
TY 20 – Understory = 100%
TY 50 – Understory = 100%

Variable V_4 – Hydrology

FWOP- Due to hydric soil, site elevations and historic records of seasonal flooding, all locations (TY0-50) were classified as follows:

Flooding Duration= Moderate and Flow/Exchange= Seasonal.

FWP- Site alternations such as clearing, felling, trimming, and cutting of trees and other vegetation designated for removal, could improve overall flooding conditions. Conditions are expected to remain constant.

Flooding Duration= Moderate and Flow/Exchange= Temporary.

Variable V_5 – Size of Contiguous Forested Area

FWOP- Corridors over 75 feet wide constitute a break in the forested area contiguity and are considered fragmented. Tracts >500 acres in size are optimal.

Class 1	0 to 5 acres
Class 2	5.1 to 20 acres
Class 3	20.1 to 100 acres
Class 4	100.1 to 500 acres
Class 5	> 500 acres

Sites varied in size of contiguous forested area. Some sites had optimal contiguity, offering higher quality habitat. While other sites lacked forested habitat and created a fragmented nature of the surrounding land cover. Conditions are assumed to remain constant throughout all target years.

FWOP conditions are as follows:

Lower Bayou Fountain: Class 5
Lower Jones Creek: Class 5
Lower Ward Creek: Class 4

FWP-. If existing habitat conditions and surrounding land cover remain unchanged, then following classes will remain constant for all subsequent target years:

Lower Bayou Fountain: Class 1
Lower Jones Creek: Class 1
Lower Ward Creek: Class 1

Variable V_6 – Suitability and Traversability of Surrounding Land Uses

To measure the effects of surrounding land use, a 0.5 mile buffer was created around the perimeter of the site polygon. Utilizing Google Earth imagery, visual estimates were used to determine the percentage of land use. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP.

Lower Bayou Fountain:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	55%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	0%
Active agriculture	4%
Non-habitat: linear, residential, commercial, industrial development, etc.	41%

Lower Jones Creek:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	20%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	0%
Active agriculture	5%
Non-habitat: linear, residential, commercial, industrial development, etc.	75%

Lower Ward Creek:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	15%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	5%
Active agriculture	0%
Non-habitat: linear, residential, commercial, industrial development, etc.	80%

Variable V_7 – Disturbance

The effect of disturbance is a factor of the average distance and the type of disturbance and therefore both are factored into the SI formula. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP.

Distance Class	Disturbance Type Class
Class 1. 0 to 50 ft.	**Class 1.** Constant/Major. (Major highways, industrial, commercial, major navigation.)
Class 2. 50.1 to 500 ft.	**Class 2.** Frequent/Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats).
Class 3. > 500 ft.	**Class 3.** Seasonal/Intermittent. (Agriculture, aquaculture.)
	Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of way).

Disturbance Type:
Lower Bayou Fountain: Distance Class 2 and Type Class 2
Lower Jones Creak: Distance Class 2 and Type Class 2
Lower Ward Creek: Distance Class 1 and Type Class 1

Project Impact Summary

Lower Bayou Fountain

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	32.72
B. Future With Project AAHUs =	0.33
Net Change (FWP - FWOP) =	**-32.39**

Lower Jones Creek

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	26.56
B. Future With Project AAHUs =	0.27
Net Change (FWP - FWOP) =	**-26.30**

Lower Ward Creek

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	23.95
B. Future With Project AAHUs =	0.24
Net Change (FWP - FWOP) =	**-23.71**

APPENDIX D: WETLAND VALUE ASSESSMENT

U.S. Fish and Wildlife Service, Ecological Services
200 Dulles Drive, Lafayette, LA 70506
(337) 291-3100, FAX (337) 291-3139

MEMORANDUM

DATE: October 01, 2020

TO: U.S. Army Corps of Engineers (NOD)

FROM: U.S. Fish and Wildlife Service (Service)

SUBJECT: Project Information Sheet for the Bottomland Hardwood Wetland Value Assessment (WVA) for the proposed East Baton Rouge Parish Flood Risk Management Project, Clearing and Snagging of Lower Bayou Fountain, Lower Jones and Lower Ward Creeks.

The proposed East Baton Rouge Parish Flood Risk Management Project consists of clearing and snagging a total of approximately 11.5 miles of streambed across the Lower Bayou Fountain (LBF), Lower Ward Creek (LWC) and Lower Jones Creek (LJC) waterways in East Baton Rouge Parish, Louisiana. Approximately 2.1 acres of BLH forest would be impacted by clearing the proposed projects access corridors in the Lower Bayou Fountain and the Lower Ward Creek.

The USACE-certified Wetland Value Assessment (WVA) Bottomland Hardwood Model (version 1.2) as well as the Hurricane and Storm Risk Reduction System (HSDRRS) for BLH mitigation [LPV & WBV]Mitigation Assumption Guide (Revised/Updated: 3 March 2012) were used to evaluate impacts. Target Years (TY) were set as follow: 0, 1, 20 and 50.

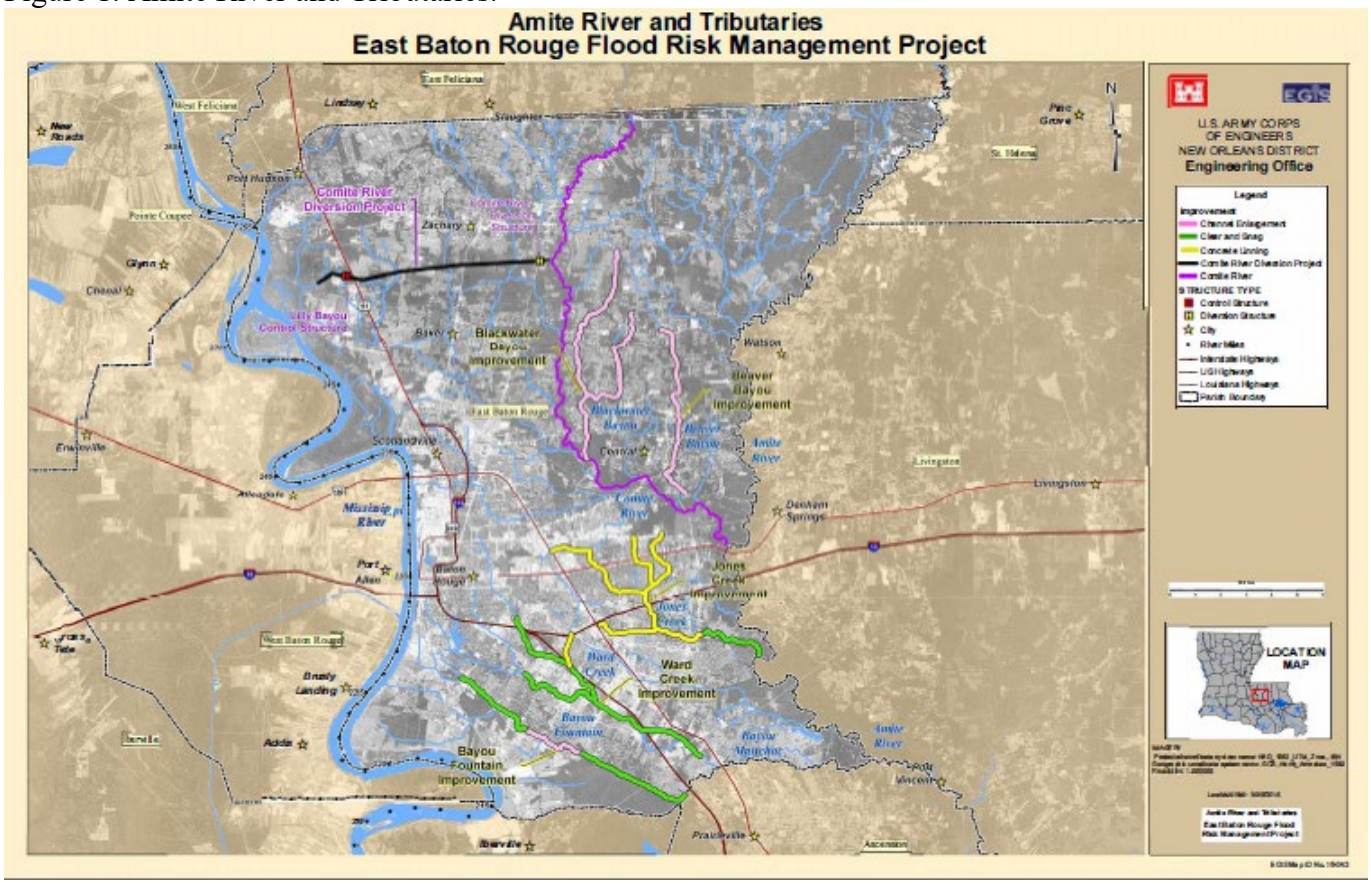
WVA models were previously performed for the East Baton Rouge staging areas and the projects right of ways. This supplemental PIS addresses additional impacts associated with the clearing and snagging of the access corridors for Lower Bayou Fountain and Lower Ward Creek.

Project associated impacts:

Lower Bayou Fountain:
Access corridor = ~ 1.6 acres of BLH impacted

Lower Ward Creek:
Access corridor = ~0.50 acres BLH impacted

Figure 1. Amite River and Tributaries.



Variable V_1 – Tree Species Association

FWOP- Due to the inability to perform field work at this time, all proposed staging sites were assigned a Class 5 through all FWOP target years. The land cover is not expected to change.

Class 5: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 20% of the canopy.

FWP- Proposed planting would consist of a mix of 60 percent hard-mast producing species and 40 percent soft-mast producing species. It is assumed that this species composition will remain static over the length of analysis. Plantings will occur in TY1 post construction. All tress will be approximately 1 year of age at initial planting. It is assumed that a Class 5 composition will be achieved at year 20 and will remain constant for all subsequent target years. FWP class levels were determined as follows for each TY:

TY 0 - Class 1
TY 1- Class 1 (Planted seedlings are 1 year old at the time of planting.)
TY 20- Class 5 (Planted trees are 20 years old.)
TY 50- Class 5 (Planted trees are 50 years old.)

Variable V_2 – Stand Maturity

FWOP- Due to the inability to perform field work at this time, it is assumed that the average age of canopy-dominant and canopy-codominant trees is 50 years old or greater. An age of 50 (when maximum SI = 1.0 is achieved) was entered for all target years for FWOP.

FWP- Stand maturity is based upon the average age or dbh of canopy-dominant and canopy-codominant trees. For the FWP scenario, the ages are set as follows:

TY 0 - Age 0
TY 1 - Age 1 (Planted seedlings are 1 year old.)
TY 20 - Age 20
TY 50 - Age 50

Variable V_3 – Understory/Midstory

FWOP- Due to the inability to perform field work at this time, HSDRRS assumptions for a 50-year old site were applied to all locations for all target years.

TY 50 - Understory = 35% // Midstory = 30%

FWP- Standard HSRDRSS assumptions were applied to all sites as follows:

TY 0 – Understory = 0% // Midstory = 0%
TY 1 – Understory = 100% // Midstory = 0%
TY 20 – Understory = 25% // Midstory = 60%
TY 50 – Understory = 35% // Midstory = 30%

Variable V_4 – Hydrology

FWOP- Due to hydric soil, site elevations and historic records of seasonal flooding, all locations (TY0-50) were classified as follows:

Flooding Duration= Moderate and Flow/Exchange= Seasonal.

FWP- Site alternations such as clearing, felling, trimming, and cutting of trees and other vegetation designated for removal, could improve overall flooding conditions. Conditions are expected to remain constant.

Flooding Duration= Moderate and Flow/Exchange= Temporary.

Variable V_5 – Size of Contiguous Forested Area

FWOP- Corridors over 75 feet wide constitute a break in the forested area contiguity and are considered fragmented. Tracts >500 acres in size are optimal.

Class 1	0 to 5 acres
Class 2	5.1 to 20 acres
Class 3	20.1 to 100 acres
Class 4	100.1 to 500 acres
Class 5	> 500 acres

Sites varied in size of contiguous forested area. Some sites had optimal contiguity, offering higher quality habitat. While other sites lacked forested habitat and created a fragmented nature of the surrounding land cover. Conditions are assumed to remain constant throughout all target years.

FWOP conditions are as follows:

Lower Bayou Fountain: Class 5
Lower Ward Creek: Class 4

FWP- Sites are considered "forested" when trees have reached 20 years of age. If existing habitat conditions and surrounding land cover remain unchanged, then following classes will be achieved at year 20 and will remain constant for all subsequent target years:

Lower Bayou Fountain: Class 5
Lower Ward Creek: Class 4

Variable V_6 – Suitability and Traversability of Surrounding Land Uses

To measure the effects of surrounding land use, a 0.5 mile buffer was created around the perimeter of the site polygon. Utilizing Google Earth imagery, visual estimates were used to determine the percentage of land use. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP.

Lower Bayou Fountain:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	75%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	0%
Active agriculture	3%
Non-habitat: linear, residential, commercial, industrial development, etc.	22%

Lower Ward Creek:

LAND USE	Percent of 0.5-mile circle
BLH, other forested areas, marsh habitat, etc.	25%
Abandoned agriculture, overgrown fields, dense cover, etc.	0%
Pasture, hayfields, etc.	20%
Active agriculture	10%
Non-habitat: linear, residential, commercial, industrial development, etc.	45%

Variable V_7 – Disturbance

The effect of disturbance is a factor of the average distance and the type of disturbance and therefore both are factored into the SI formula. Existing conditions are not expected to change through the life of the project and will remain constant for the FWOP and FWP.

Distance Class	Disturbance Type Class
Class 1. 0 to 50 ft.	**Class 1.** Constant/Major. (Major highways, industrial, commercial, major navigation.)
Class 2. 50.1 to 500 ft.	**Class 2.** Frequent/Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats).
Class 3. > 500 ft.	**Class 3.** Seasonal/Intermittent. (Agriculture, aquaculture.)
	Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of way).

Disturbance Type:
Lower Bayou Fountain: Distance Class 2 and Type Class 2
Lower Ward Creek: Distance Class 1 and Type Class 1

Project Impact Summary

Lower Bayou Fountain

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	1.44
B. Future With Project AAHUs =	0.98
Net Change (FWP - FWOP) =	**-0.46**

Lower Ward Creek

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future Without Project AAHUs =	0.33
B. Future With Project AAHUs =	0.22
Net Change (FWP - FWOP) =	**-0.10**