APPENDIX B: TABLES

Table 1. Total Impacts for NFL NOV Projects Currently Moving to Construction Including New Proposed ROW (ROW impacts in red and bold)

NOV***	**BLH Wet**		**BLH Dry**		**Wet Pasture**		**Swamp**		**Scrub Shrub**		**Intermediate Marsh**		**Freshwater Marsh**		**Brackish Marsh**		**Open Water**		**Saline Marsh**		**Total**	
Levee Reach	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	**Acres**	**AAHUs**
NOV 05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	30.6	**51.9**	**33.2**
NOV 07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.1	14.7	**22.1**	**14.7**
NOV 09	**23.5**	**14.3**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**23.5**	**14.3**
NOV 10	30.1	18.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**30.1**	**18.4**
NOV 11	9.8	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.4	5.2	0.0	0.0	0.0	0.0	0.0	0.0	**30.2**	**11.2**
NOV 02, NOV 06b, NOV 08b, NOV 13, NOV 14, P14A, P17A	12.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	64.0	48.5	**77.6**	**56.7**
Total NOV	**76.2**	**46.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**5.6**	**2.5**	**0.8**	**0.4**	**20.4**	**5.2**	**0.0**	**0.0**	**0.0**	**0.0**	**132.4**	**93.8**	**235.4**	**148.5**
NFL***	**BLH Wet**		**BLH Dry**		**Wet Pasture**		**Swamp**		**Scrub Shrub**		**Intermediate Marsh**		**Freshwater Marsh**		**Brackish Marsh**		**Open Water**		**Saline Marsh**		**Total**	
Levee Reach	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	Acres	AAHUs	**Acres**	**AAHUs**
NFL Section 1	19.3	13.8	12.0	7.7	0.0	0.0	39.1	33.5	0.0	0.0	0.0	0.0	18.7	12.4	0.0	0.0	0.2	0.0	0.0	0.0	**89.2**	**67.4**
NFL Section 2	0.0	0.0	0.0	0.0	**34.9**	**11.4**	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**35.2**	**11.6**
NFL Section 3	5.7	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	3.2	0.4	0.0	0.0	0.0	**13.7**	**7.3**
NFL Section 4	9.4	6.7	20.0	13.0	70.0	22.8	0.0	0.0	1.5	0.0	0.6	0.0	0.0	0.0	5.1	4.6	10.4	0.0	0.0	0.0	**117.0**	**48.1**
Section 2+ 4 Canals	2.5	1.8	0.0	0.0	55.7*	18.2*	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**11.5**	**7.6**
Section 2+ 4 Canal Access Road	0.3	0.2	0.0	0.0	3.5	1.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**4.1**	**1.6**
NFL Section 5	66.0	47.1	11.3	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	3.4	4.3	0.0	0.0	0.0	**87.5**	**57.7**
Total NFL	**103.1**	**73.6**	**43.3**	**35.0**	**108.4**	**35.3**	**39.4**	**33.8**	**10.8**	********	**0.6**	******	**18.7**	**12.4**	**18.7**	**11.4**	**15.3**	*******	**0.0**	**0.0**	**358.2**	**201.2**
Total NOV + NFL	179.2	120.2	43.3	35.0	108.4	35.3	39.4	33.8	16.5	2.5	1.4	0.4	39.1	17.6	18.7	11.4	15.3	-	132.4	93.8	593.7	350.0

*Note: Wet pasture impacts for Section 2 + 4 Canals are considered temporary and will self-mitigate within 1 year. These acres and AAHUs are not included in the required mitigation.
**Note: Intermediate Marsh impacts are combined with Brackish Marsh impacts for total AAHUs; however mitigation for intermediate, brackish, and saline marsh habitat is not a part of the Proposed Action and will be evaluated in a forthcoming supplemental environmental document. See Section 1.1.
***Note: Open Water habitat impacts are captured within the AAHUs for the type of Marsh given their location and salinity level.
****Note: Scrub Shrub impacts would be mitigated as BLH Dry (see Section 2.2) and are reflected in total AAHUs for BLH-Dry.
*****Note: All BLH Dry and wet pasture impacts occurred on the protected side of the levees. All other impacts occurred on the flood side of the levees.

Table B-2: Risk and Reliability Data Matrix

Non-Park/404c BLH-Dry PS			
	PPG BLH Dry	**Segnette BLH Dry**	**Mitigation Bank**
Uncertainty Relative to Achieving Ecological Success	Adaptive mgmt. needed. 0	Adaptive mgmt. needed. 0	Minimal uncertainty, no adaptive mgmt need. + 100% of need is currently available for credit purchase
Uncertainty Relative to Implementability Concerns	PPG Owner. Navy Easement but initial discussions, suggests they are willing to let go of easement. Tree species acceptable heights 0	Real Estate: 1 Private owner --	Minimal uncertainty +
Adaptability	Opportunity to add additional 30% to acreage. +	Can plant species that handle wetter environment Adaptable to 100%+ acreage increase +	52.4 acres, 15.7 acres, 17.8 acres* + *not for CZ impacts
Long-term Sustainability	1.0 +	1.0 +	~~1.0~~ 0.86 and 0.97 +*Available Bank WVA DATA
Active engineering features?	No +	No +	N/A (the bank is responsible) +
Anticipated OMRR&R Activities	Less likely need for invasive species control, no adjacent seed source, additional planting (if needed), and general monitoring. 0	Existing invasive species seed source. Increased need for invasive species control. Additional planting (if needed), and general monitoring. --	N/A (the bank is responsible) +
Relative Difficulty OMRR&R	Standard 0	Standard, greater distance for maintenance --	N/A (the bank is responsible) +
Relative Probability of Exposure to Stressors	Higher elevation 0	Lower elevation 0	0 *not a risk bank will comply with MBI
Project Performance Relative to Stressors/Resiliency After Exposure to Stressors	Dry species may not adapt well to flooding *Pumps are an equalizer 0	Wet species may adapt better to flooding *Pumps are an equalizer 0	0 *not a risk bank will comply with MBI
Financial Assurances	YES + *NFS will uphold PPA	YES + *NFS will uphold PPA	YES + *bank will uphold MBI

Non-Park/404c BLH-Wet FS

	Jesuit Bend BLH-Wet	The Tank BLH-Wet	Mitigation Bank
Uncertainty Relative to Achieving Ecological Success	Uncertainty in hydrology associated with BLH-Wet creation. Preferred borrow material. Adaptive mgmt. needed. --	Uncertainty in hydrology and constructability associated with BLH-Wet creation. Fine borrow material. Adaptive mgmt. needed. -- --	Minimal uncertainty, no adaptive mgmt need. + 155.88 AAHUs available for BLH Wet 173.68 AAHUs available now for CZ + Non CZ
Uncertainty Relative to Implementability Concerns	Real Estate: ~30 Private owners, Borrow source could be utilized by CPRA prior to project construction -- --	Real Estate: Public owner; Project may not be supported by La Dept. of Wildlife and Fisheries, Davis Pond Diversion reduces salinity in areas. --	Minimal uncertainty +
Adaptability	Minimal opportunity to add acreage. Manipulating elevation after planting is not practical. 0	Potential Opportunity to add additional acreage. Manipulating elevation after planting is not practical. +	+ 130.7 AAHUs needed to mitigate for NOV/NFL 68.01 AAHUs future release = 52% increase available
Long-term Sustainability	1.0 +	1.0 +	~~1.0~~ 0.86 and 0.97 +*Available Bank WVA DATA
Active engineering features?	No +	No +	N/A (the bank is responsible) +
Anticipated OMRR&R Activities	Inv species control, additional planting (if needed) and general monitoring. 0	Inv species control, additional planting (if needed), additional maintenance for stone armoring, and general monitoring. --	N/A (the bank is responsible) +
Relative Difficulty OMRR&R	Standard 0	Standard, greater distance for maintenance, , rock adds difficulty for O&M --	N/A (the bank is responsible) +
Relative Probability of Exposure to Stressors	Susceptible to higher salinity impacts 0	Less susceptible to salinity impacts b/c of location in watershed. 0	0 Not a risk, bank will comply with MBI
Project Performance Relative to Stressors/Resiliency After Exposure to Stressors	Salinity could stress/kill trees, sea level rise could convert BLH to different habitat. 0	Salinity could stress/kill trees, sea level rise could convert BLH to different habitat. 0	0 Not a risk, bank will comply with MBI
Financial Assurances	YES +	YES +	YES +

Non-Park/404c Swamp FS

	Jesuit Bend Swamp	Lake Salvador Swamp	Mitigation Bank
Uncertainty Relative to Achieving Ecological Success	Uncertainty in hydrology associated with Swamp creation at this location. Preferred borrow material. Adaptive mgmt. needed. **--**	Uncertainty in hydrology and constructability associated with swamp creation. Fine borrow material. Adaptive mgmt. needed. **-- --**	Minimal uncertainty, no adaptive mgmt need. + Exact mitigation potential unknown; assume 0.43 37.63 AAHUs currently available Need 33.8 AAHUs to mitigate for NFL/NOV
Uncertainty Relative to Implementability Concerns	Real Estate: ~30 Private owners, Borrow source may be utilized by CPRA prior to project construction **-- --*multiple landowners**	Real Estate: Public owner; Coordination with NPS required *NPS (landowner) will support project +	No uncertainty, bank already implemented +
Adaptability	Opportunity to add additional 80% to acreage. Manipulating elevation after planting is not practical. +	Opportunity to add additional 80% to acreage. Manipulating elevation after planting is not practical. +	+ Same assumptions as above, 21 AAHUs available in future = 56%
Long-term Sustainability	0.6 0	0.6 0	Unknown 0
Active engineering features?	No +	No +	N/A (the bank is responsible) +
Anticipated OMRR&R Activities	Inv species control, additional planting (if needed) and general monitoring. 0	Inv species control, general monitoring), additional maintenance for stone armoring may be necessary. **--**	N/A (the bank is responsible) +
Relative Difficulty OMRR&R	Standard 0	Standard, greater distance for maintenance, rock adds difficulty for O&M **--**	N/A (the bank is responsible) +
Relative Probability of Exposure to Stressors	More protected from daily wave action; Susceptible to higher salinity impacts 0	Susceptible to wave action, but has stone armoring; may be susceptible to salinity increases **0**	0 Not a risk, bank will comply with MBI
Project Performance Relative to Stressors/Resiliency After Exposure to Stressors	Salinity could stress/kill trees, sea level rise could convert swamp to different habitat. **0**	Salinity could stress/kill trees, sea level rise could convert swamp to different habitat. 0	0 Not a risk, bank will comply with MBI
Financial Assurances	YES +	YES +	YES +

Non-Park/404c Brackish Marsh FS

	Coleman Brackish Marsh	Defelice Brackish Marsh
Uncertainty Relative to Achieving Ecological Success	Minimal uncertainty, preferred borrow material. Adaptive mgmt. needed. 0 *close to the Mid Barataria Diversion	Minimal uncertainty, preferred borrow material. Adaptive mgmt. needed. 0 *close to the Mid Barataria Diversion
Uncertainty Relative to Implementability Concerns	Real Estate: 1 Private owner, adjacent utility easements. 0	Real Estate: 1 Private owner, adjacent utility easements. -- *length of pipeline introduces constructability issues b/c so long
Adaptability	Opportunity to add additional 70% to acreage. +	Minimal opportunity to add acreage. **0**
Long-term Sustainability	87.36 **+**	67 0
Active engineering features?	No +	No +
Anticipated OMRR&R Activities	Inv species control, general monitoring 0	Inv species control, general monitoring 0
Relative Difficulty OMRR&R	Standard 0	Standard 0
Relative Probability of Exposure to Stressors	Susceptible to wave action; may be more susceptible to salinity increases 0	Susceptible to wave action; may be more susceptible to salinity increases 0
Project Performance Relative to Stressors/Resiliency After Exposure to Stressors	Sea level rise could convert marsh to different habitat (open water) 0	Sea level rise could convert marsh to different habitat (open water) 0
Financial Assurances	YES +	YES +

Non-Park/404c Fresh Marsh FS

	Cataouatche Ponds Fresh Marsh	GIWW/Salvador Fresh Marsh	Mitigation Bank	Mitigation Bank/ILF
Uncertainty Relative to Achieving Ecological Success	Minimal uncertainty, fine borrow material. Adaptive mgmt. needed. +	Minimal uncertainty, fine borrow material. Adaptive mgmt. needed. uncertainty on producing fully functioning marsh (rock on both sides, but would have fish dips) --	Minimal uncertainty, no adaptive mgmt need. +	Bank Minimal uncertainty, no adaptive mgmt need. **0** ILF project not implemented
Uncertainty Relative to Implementability Concerns	Real Estate: Public owner; Coordination with NPS required but currently in agreement. 0	Real Estate: Public owner, Entergy overhead power easement and Gulf South Pipeline present within project area. --	Minimal uncertainty + *bank already an implemented project	Minimal uncertainty +
Adaptability	Some opportunity to add acreage ~30%. 0	Opportunity to add additional 30% to acreage. 0	+ 123.7 acres available current and 123.9 acres available in future	After credits are purchased no adaptation is necessary. ILF 54 advanced credits available ILF 25 credits unfulfilled available Bank 123.7 acres available current and 123.9 acres available in future +
Long-term Sustainability	91.4 +	91.44 +	Unknown 0	Unknown 0
Active engineering features?	No +	No +	N/A (the bank is responsible) +	N/A +
Anticipated OMRR&R Activities	Inv species control, general monitoring 0	Inv species control, general monitoring), additional maintenance for stone armoring may be necessary. --	N/A (the bank is responsible) +	N/A +
Relative Difficulty OMRR&R	Standard *outside of Parish --	Standard *outside of parish and rock to maintain, need additional equipment to maintain -- --	N/A (the bank is responsible) +	N/A +
Relative Probability of Exposure to Stressors	More protected from daily wave action 0	Susceptible to wave action, but has stone armoring -- Location further south potentially has salinity influence,	Not a risk Bank has to comply with MBI 0	Not a risk ILF/Bank has to comply with Instrument/MBI 0
Project Performance Relative to Stressors/Resiliency After Exposure to Stressors	Sea level rise could convert marsh to different habitat (open water) 0	Sea level rise could convert marsh to different habitat (open water) 0	Not a risk Bank has to comply with MBI 0	Not a risk ILF/Bank has to comply with Instrument/MBI 0
Financial Assurances	YES +	YES +	YES +	YES +

Table B-3: Watershed & Ecological Site Considerations Data Matrix

Watershed & Ecological	Watershed Considerations/Significance in Watershed					Ecological Site Considerations (swamp and marsh only)	
Alternatives	Contiguous With or Within Resource Managed Area	Located in Parish with Impacts	Critical Geomorphic Feature	LaCPR Critical Landscape Feature	Habitat Linkage	Fragmentation Within Site Boundary	Habitat Connectivity To Larger Project Area Given Future Land Use Trends
PPG BLH Dry	Completely within the protected side of the WBV HSDRRS 0	Yes (Plaquemines) +	No 0	No 0	No 0	N/A	N/A
Segnette BLH Dry	Completely within the protected side of the WBV HSDRRS and Completely within the protected side of the HSDRRS Storm-Proofing of Interior Pumping Stations BA-0074 **0**	No (Jefferson) **--**	No **0**	No **0**	No (it is not creating a linkage, but maintaining the linkage) 0	N/A	N/A
Mitigation Bank	0	2 approved banks w/in watershed **0** **Parish expressed non concern if bank outside parish**	No change to existing condition **0**	No change to existing condition **0**	No change to existing condition **0**	N/A	N/A

Watershed & Ecological -	With State Master Plan	With Coast 2050 Plan	With LCA	With LACPR
Alternatives	**Yes / No (objective**	**Yes / No (objective**	**Yes / No**	**Yes / No**
PPG BLH Dry	No On the protected side of the levee project 002.HP.08 Maintain West Bank Levees for Structural Protection, however no restoration projects on the protected side of the levee. However, the plan supports the Coastal Forest Conservation Initiative **0*Not inconsistent with SMP**	Yes Strategic Goals (Restore BLH dry not wetlands) 0	No This project is inside the WBV levee system, in addition all LCA projects in this area are suspended **0**	No Not coincident with a coastal measure. Project is located on the protected side of the existing WBV levee and also on the protected side of planning unit 2, alternative 1 - authorized 100-year levees and proposed alternative 2 - GIWW barrier-weir which adds no additional benefit to existing and proposed levees. **0**
Segnette BLH Dry	No On the protected side of the levee project 002.HP.08 Maintain West Bank Levees for Structural Protection, however no restoration projects on the protected side of the levee. However, the plan supports the Coastal Forest Conservation Initiative **0*Not inconsistent with SMP**	Yes Strategic Goals (Restore wetlands) +	No This project is inside the WBV levee system, in addition all LCA projects in this area are suspended **0**	No Not coincident with a coastal measure. Project is located on the protected side of the existing WBV levee and also on the protected side of planning unit 2, alternative 1 - authorized 100-year levees and proposed alternative 2 - GIWW barrier-weir which adds no additional benefit to existing and proposed levees. **0**
Mitigation Bank	No change to the ecosystem since the habitat is already in place **0**	No change to the ecosystem since habitat already in place **0**	No change to the ecosystem since habitat already in place 0	No Change to the ecosystem since the habitat is already in place **0**

Watershed & Ecological	Watershed Considerations/Significance in Watershed					Ecological Site Considerations (swamp and marsh only)	
Alternatives	Contiguous With or Within Resource Managed Area	Located in Parish with Impacts	Critical Geomorphic Feature	LaCPR Critical Landscape Feature	Habitat Linkage	Fragmentation Within Site Boundary	Habitat Connectivity To Larger Project Area Given Future Land Use Trends
Jesuit Bend BLH-Wet	Completely within the BA-01 Davis Pond Freshwater Diversion Area **0**	Yes (Plaquemines) **+**	No **0**	Yes Critical Feature #5 Wetlands South of GIWW **0*too vague to be substantive**	No **0**	N/A	N/A
The Tank BLH-Wet	Completely within Salvador Wildlife Management Area, Completely within the BA-01 Davis Pond Freshwater Diversion Area, Adjacent to 1991 Texaco mitigation area. Partial adjacent to Netherlands 1991 Texaco/WBV mitigation dike +	No (St Charles) **--**	No **0**	No **0**	No **0**	N/A	N/A
Mitigation Bank	0	2 approved banks w/in watershed **0** **Parish expressed non concern if bank outside parish**	No change to existing condition **0**	No change to existing condition **0**	No change to existing condition **0**	N/A	N/A

Watershed & Ecological -	With State Master Plan	With Coast 2050 Plan	With LCA	With LACPR
Alternatives	**Yes / No (objective**	**Yes / No (objective**	**Yes / No**	**Yes / No**
Jesuit Bend BLH-Wet	Consistent with SMP Completely within the proposed Mid-Barataria Diversion area (002.DI.03 1st increment 50,000cfs and 002.DI.03a 2nd increment 250,000cfs. Sediment diversion into mid-Barataria in the vicinity of Myrtle Grove to build and maintain land 0	Yes Regional Ecosystem Strategies (Restore wetlands), Strategic Goals (Create wetlands, dedicated dredging) **+**	No LCA projects in this area are suspended **0**	Yes Completely within coastal measure 2-4 Naomi Diversion – sized to sustain receiving area; Project is located adjacent to and on the floodside of Oakville to La Reussite Non-Federal Levee and on the floodside of planning unit 2, alternative 1 authorized 100-year levees (including ring levees) and proposed alternative 2 - GIWW levee (including ring levees) which benefits existing and proposed levees by providing additional wooded acreage to be converted from open water **0**
The Tank BLH-Wet	Not inconsistent with SMP Area on the floodside of the Maintain West Bank Levees (002.HP.08) and restoration projects in upper Barataria Basin are not included in the 2012 Master Plan **0**	Yes Regional Ecosystem Strategies (Restore wetlands, maintain critical landforms by preserving bay and lake shoreline integrity), Strategic Goals (Create wetlands, dedicated dredging) **+**	No LCA projects in this area are suspended **0**	Yes Completely within coastal measure 2-3 Davis Pond Freshwater Diversion reauthorization - run full discharge one year out of 5 years; Project is located on the floodside of existing WBV levees and planning unit 2, alternative 1, authorized 100-year levees (including ring levees). However, project is located on the protected side of the proposed alternative 2 –GIWW barrier weir which adds no benefit to proposed levees. **0**
Mitigation Bank	No change to the ecosystem since the habitat is already in place **0**	No change to the ecosystem since habitat already in place **0**	No change to the ecosystem since habitat already in place 0	No Change to the ecosystem since the habitat is already in place **0**

Watershed & Ecological	Watershed Considerations/Significance in Watershed					Ecological Site Considerations (swamp and marsh only)	
Alternatives	Contiguous With or Within Resource Managed Area	Located in Parish with Impacts	Critical Geomorphic Feature	LaCPR Critical Landscape Feature	Habitat Linkage	Fragmentation Within Site Boundary	Habitat Connectivity To Larger Project Area Given Future Land Use Trends
Jesuit Bend Swamp	Completely within the BA-01 Davis Pond Freshwater Diversion Area **0**	Yes (Plaquemines) **+**	No **0**	Yes Critical Feature #5 Wetlands South of GIWW **0**	No **0**	No **0**	No **0**
Lake Salvador Swamp	Completely within the BA-01 Davis Pond Freshwater Diversion Area, Completely within Jean Lafitte National Historical Park and Preserve; Partially adjacent to JLNHPP Lake Salvador Shoreline Protection and approved HSDRRS WBV mitigation area; adjacent from BA-16 Bayou Segnette Shoreline Protection Benefit area +	No (Jefferson) **--**	Yes (lake rim) **+**	No **0**	No **0**	No 0	No 0
Mitigation Bank	0	2 approved banks w/in watershed **0** **Parish expressed non concern if bank outside parish**	No change to existing condition **0**	No change to existing condition **0**	No change to existing condition **0**	No change to existing condition **0**	No change to existing condition **0**

Watershed & Ecological	With State Master Plan	With Coast 2050 Plan	With LCA	With LACPR
Alternatives	**Yes / No (objective**	**Yes / No (objective**	**Yes / No**	**Yes / No**
Jesuit Bend Swamp	Yes Completely within the Mid- Barataria Diversion area (002.DI.03 1st increment 50,000cfs and 002.DI.03a 2nd increment 250,000cfs. Sediment diversion into mid-Barataria in the vicinity of Myrtle Grove to build and maintain land 0	Yes Regional Ecosystem Strategies (Restore swamps), Strategic Goals (Create wetlands, dedicated dredging) +	No LCA projects in this area are suspended **0**	Yes Completely within coastal measure 2-4 Naomi Diversion – sized to sustain receiving area; Project is located adjacent to and on the floodside of Oakville to La Reussite Non-Federal Levee and on the floodside of planning unit 2, alternative 1 authorized 100-year levees (including ring levees) and proposed alternative 2 - GIWW levee (including ring levees) which benefits existing and proposed levees by providing additional swamp acreage to be converted from open water 0
Lake Salvador Swamp	Not Inconsistent Area on the floodside of Maintain West Bank Levees (002.HP.08) and restoration projects in upper Barataria Basin are not included in the 2012 Master Plan **0**	Yes Regional Ecosystem Strategies (Restore swamps; Maintain critical landforms by preserving bay and lake shoreline integrity) Strategic Goals (Create wetlands, dedicated dredging) +	No LCA projects in this area are suspended **0**	Yes Completely within coastal measure 2-3 Davis Pond Freshwater Diversion reauthorization - run full discharge one year out of 5 years; Project is located on the floodside of WBV levee and planning unit 2, alternative 1, authorized 100-year levees (including ring levees).). However, project is located on the protected side of the proposed alternative 2 - GIWW barrier weir which adds no benefit to proposed levees. **0**
Mitigation Bank	No change to the ecosystem since the habitat is already in place **0**	No change to the ecosystem since habitat already in place **0**	No change to the ecosystem since habitat already in place 0	No Change to the ecosystem since the habitat is already in place **0**

Watershed & Ecological	Watershed Considerations/Significance in Watershed					Ecological Site Considerations (swamp and marsh only)	
Alternatives	Contiguous With or Within Resource Managed Area	Located in Parish with Impacts	Critical Geomorphic Feature	LaCPR Critical Landscape Feature	Habitat Linkage	Fragmentation Within Site Boundary	Habitat Connectivity To Larger Project Area Given Future Land Use Trends
Coleman Brackish Marsh	Completely within the BA-01 Davis Pond Freshwater Diversion Area, Completely within BA-04 West Pointe a la Hache Siphon Diversion Area. **0**	Yes (Plaquemines) **+**	No 0	No 0	Partial 0	No 0	No 0
Defelice Brackish Marsh	Completely within the BA-01 Davis Pond Freshwater Diversion Area **0**	Yes (Plaquemines) +	No 0	No 0	Partial 0	No 0	No 0

Watershed & Ecological -	With State Master Plan	With Coast 2050 Plan	With LCA	With LACPR
Alternatives	**Yes / No (objective**	**Yes / No (objective**	**Yes / No**	**Yes / No**
Coleman Brackish Marsh	Yes. Completely within the Mid-Barataria Diversion area (002.DI.03 1st increment 50,000cfs and 002.DI.03a 2nd increment 250,000cfs.) located in the vicinity of Myrtle Grove to build and maintain land. Majority within the Lower Barataria Diversion area (002.DI.15 1st increment 50,000cfs) located in the vicinity of Empire to build and maintain land. While the West Pointe a la Hache project is not a part of the State Master Plan since it is already operational, the State feels that this project is important to the overall restoration strategy (pg 155 SMP 2012) *potential habitat shift to more fresh with Mid Barataria sediment diversion, but master plan supports marsh creation +	Yes Regional Ecosystem Strategies (Restore and Sustain Marsh, Completely within Objective 8. Construction of effective small diversions); Strategic Goals (Create Wetlands, Dedicated Dredging) +	No LCA projects in this area are suspended **0**	Yes Completely within coastal measure 2-8 West Pointe a la Hache Diversion – sized to sustain receiving area. Project is located adjacent to and on the floodside of the Plaquemines Parish Non-Federal levee from Le Reussite to St. Jude which benefits existing and proposed levees by providing additional marsh acreage to be converted from open water +
Defelice Brackish Marsh	Yes. Completely within the Mid-Barataria Diversion area (002.DI.03 1st increment 50,000cfs and 002.DI.03a 2nd increment 250,000cfs.) located in the vicinity of Myrtle Grove to build and maintain land. *potential habitat shift to more fresh with Mid Barataria sediment diversion, but master plan supports marsh creation +	Yes Regional Ecosystem Strategies (Restore and Sustain Marsh, Completely within Objective 10 Delta building diversion at Myrtle Grove/Naomi); Strategic Goals (Create Wetlands, Dedicated Dredging) +	No LCA projects in this area are suspended **0**	Yes Completely within coastal measure 2-5 Myrtle Grove Diversion – sized to sustain receiving area. Project is located adjacent to and on the floodside of the Plaquemines Parish Non-Federal levee from Le Reussite to St. Jude which benefits existing and proposed levees by providing additional marsh acreage to be converted from open water **+**

Watershed & Ecological	Watershed Considerations/Significance in Watershed					Ecological Site Considerations (swamp and marsh only)	
Alternatives	Contiguous With or Within Resource Managed Area	Located in Parish with Impacts	Critical Geomorphic Feature	LaCPR Critical Landscape Feature	Habitat Linkage	Fragmentation Within Site Boundary	Habitat Connectivity To Larger Project Area Given Future Land Use Trends
Cataouatche Ponds Fresh Marsh	Completely within the BA-01 Davis Pond Freshwater Diversion Area, Completely within Jean Lafitte National Historical Park and Preserve **+**	No (Jefferson) --	No **0**	No **0**	Partial 0	No **0**	No 0
GIWW/Salvador Fresh Marsh	Completely within the BA-01 Davis Pond Freshwater Diversion Area **0**	No (Jefferson) **--**	Yes (lake rim) **+**	No but in close proximity (north of) GIWW Critical Feature #5 Wetlands South of GIWW **0**	Partial **0**	No **0**	No **0**
Mitigation Bank	0	**+ Bank located within parish**	**0**	**0**	**0**	**0**	**0**
ILF/Mitigation Bank	0	**ILF uknown/Bank located within parish +**	**ILF** Unknown **0**	**ILF** Unknown **0**	**ILF** Unknown **0**	**ILF Unknown 0**	**ILF Unknown 0**

Watershed & Ecological Alternatives	With State Master Plan Yes / No (objective	With Coast 2050 Plan Yes / No (objective	With LCA Yes / No	With LACPR Yes / No
Cataouatche Ponds Fresh Marsh	Not inconsistent with SMP Area on the floodside of Maintain West Bank Levees (002.HP.08) and restoration projects in upper Barataria Basin are not included in the 2012 Master Plan **0**	Yes Regional Ecosystem Strategies (Restore and sustain marsh) Strategic Goals (Create wetlands, dedicated dredging) **+**	No LCA projects in this area are suspended **0**	Yes, Completely within coastal measure 2-3 Davis Pond Freshwater Diversion reauthorization - run full discharge one year out of 5 years; Project is located on the floodside of WBV levee and planning unit 2, alternative 1, authorized 100-year levees (including ring levees). However, project is located on the protected side of the proposed alternative 2 - GIWW barrier weir which adds no benefit to proposed levees. 0
GIWW/Salvador Fresh Marsh	Not inconsistent with SMP Partially within the Mid-Barataria Diversion area (002.DI.03 1st increment 50,000cfs and 002.DI.03a 2nd increment 250,000cfs. Sediment diversion into mid-Barataria in the vicinity of Myrtle Grove to build and maintain land 0	Yes, Regional Ecosystem Strategies (Restore and sustain marsh; Maintain critical landforms by preserving bay and lake shoreline integrity) Strategic Goals (Create wetlands, dedicated dredging) **+**	No LCA projects in this area are suspended **0**	Yes, Completely within coastal measure 2-3 Davis Pond Freshwater Diversion reauthorization - run full discharge one year out of 5 years; Project is located on the floodside of WBV levee and planning unit 2, alternative 1, authorized 100-year levees (including ring levees). However, project is located on the protected side of the proposed alternative 2 - GIWW barrier weir which adds no benefit to proposed levees. **0**
Mitigation Bank	No change to the ecosystem since the habitat is already in place 0	No change to the ecosystem since the bank is already in place 0	No change to the ecosystem since the bank is already in place 0	No Change to the ecosystem since the habitat is already in place 0
ILF/Mitigation Bank	ILF: will build w/in Master Plan/ No Change for bank 0	ILF: will build w/in 2050/No change for bank 0	Unknown/No change for bank 0	ILF: will build w/in CWPPRA/CIAP projects/No Change for bank 0

Table B-4: Environmental Impact Summary Data Matrix

SUBCRITERIA	Hydrology / Hydraulics	Navigable Waters	Scenic Rivers	Water Quality	Wildlife & Habitats	Water Bottoms / Benthic Resources	T & E Species	EFH
	Qualitative	Yes/No; Extent of impacts; Perm/Temp	Coordination or permitting necessary (yes/no); Perm/Temp	Qualitative	Acreage of habitat by type impacted; acreage of habitat by type created	Acreage; Perm/Temp	Species; Critical habitat	Acreage; Species impacted / life stage; Perm/Temp
PPG BLH Dry	No long-term impact in BLH-Dry. 0	No 0	No 0	Temporary increased turbidity. 0	Covert 100 ac. Maintained upland and pasture to BLH. Improve habitat for various species. +	No impacts 0	No impacts 0	No impacts 0
Segnette BLH Dry	No long-term impact in BLH-Dry 0	No 0	No 0	Temporary increased turbidity. -- *herbicide use	Covert 167 ac. Chinese tallow forest to BLH. Improve habitat for various species. +	No impacts 0	No impacts 0	No impacts 0
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No additional impacts for credit purchase 0, *site established	No impacts 0*habitat already established	No impacts 0	No impacts 0	No impacts 0

SUBCRITERIA	Aquatic / Fisheries	Prime Farmland	Cultural Resources	Recreation	Noise	Aesthetics	HTRW	Environmental Justice	Socioeconomics / Land Use
	Acres habitat created or eliminated	Yes/No; Acreage	Qualitative	Acreage & type of resource impacted; Acreage of resource improved	Residential or commercial within 1,000 feet	Qualitative	Probability of encountering HTRW	Low income / minority populations disproportionately impacted	# Impacted – comm./industrial properties; residential units; public properties. Acres ag or forest converted
PPG BLH Dry	None created; none eliminated 0	No 0	Low probability for impacts. However natural factors do allow a possibility that cultural resources exist and further examination may be necessary. 0	100 ac. of public-owned land improved re hiking & birding. 0	Yes. Several residences. Temporary construction impact, could buffer NAS noise +	No impacts +, subdivisions would see forest	Very Low. No wells and no pipelines present. 0	Residents live near mitigation site, however impacts are temporary, related to construction, and are not high and adverse. 0	No impacts. 0
Segnette BLH Dry	None created; none eliminated 0	No 0	No historic properties affected. 0	167 ac. privately-owned improved re hiking, wildlife viewing, hunting 0	Yes. Few commercial facilities. 0	No impacts 0	Very Low. One plugged and abandoned oil/gas well adjacent to site. 0	No impacts 0	No impacts. 0
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0

SUBCRITERIA	Hydrology / Hydraulics	Navigable Waters	Scenic Rivers	Water Quality	Wildlife & Habitats	Water Bottoms / Benthic Resources	T & E Species	EFH
	Qualitative	Yes/No; Extent of impacts; Perm/Temp	Coordination or permitting necessary (yes/no); Perm/Temp	Qualitative	Acreage of habitat by type impacted; acreage of habitat by type created	Acreage; Perm/Temp	Species; Critical habitat	Acreage; Species impacted / life stage; Perm/Temp
Jesuit Bend BLH-Wet	244 ac. open water converted to seasonally inundated /saturated soils. 0	Yes. 244 ac. open water permanently converted to BLH. Temp impact at borrow site. 0	No 0	Temporary increased turbidity. 0	244 ac. habitat for waterfowl eliminated. Same ac. habitat created for other birds & terrestrial vertebrates. Avoidance measures needed re nearby bird rookery. SAV habitat comparable at both sites 0	Permanent loss of 244 ac.; 258 ac. at borrow site temporarily impacted. 0	No impacts by mitigation features. Pallid sturgeon could occur in borrow site. 0	Perm. impact adult & juvenile brown & white shrimp, adult/juvenile red drum, juvenile grey snapper at 244 ac. mit site. Perm impact similar species at 258 ac. borrow site. --Converting waterbottoms to create mitigation could require mitigation
The Tank BLH-Wet	334 ac. open water converted to seasonally flooded soils. Shoreline erosion reduced. +	Yes. 334 ac. open water permanently converted to BLH. Temp impact at borrow site. 0	No 0	Temporary increased turbidity. -- *greater plume of turbidity in Cataouatche	334 ac. habitat for waterfowl eliminated. Same ac. habitat created for other birds & terrestrial vertebrates. SAV habitat comparable at both sites 0	Permanent loss of 334 ac.; 643 ac. borrow site temporarily impacted 0	No impacts 0	Perm. impact juvenile brown shrimp, juvenile red drum and adult/juvenile white shrimp, at 334 ac. of mit site. Perm impact similar species at 643 ac. borrow site. --Converting waterbottoms to create mitigation could require mitigation
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0

SUBCRITERIA	Aquatic / Fisheries	Prime Farmland	Cultural Resources	Recreation	Noise	Aesthetics	HTRW	Environmental Justice	Socioeconomics / Land Use
	Acres habitat created or eliminated	Yes/No; Acreage	Qualitative	Acreage & type of resource impacted; Acreage of resource improved	Residential or commercial within 1,000 feet	Qualitative	Probability of encountering HTRW	Low income / minority populations disproportionately impacted	# Impacted – comm./industrial properties; residential units; public properties. Acres ag or forest converted
Jesuit Bend BLH-Wet	244 ac. open water eliminated. --	No 0	Low probability for impacts. 0	244 ac. impacted, boating, fishing, crabbing eliminated. Same ac. improved re hiking, wildlife viewing, hunting. **0**	Yes. Several residences. 0	No impacts 0	Very Low. No wells and no pipelines present. 0	No impacts 0	No impacts. 0
The Tank BLH-Wet	334 ac. open water eliminated. --	No 0	Low probability for impacts 0	334 ac. boating, fishing, crabbing eliminated. Same ac. improved re hiking, wildlife viewing, hunting. **0**	No impacts 0	No impacts 0	Very Low. No wells and no pipelines present. 0	No impacts 0	No impacts. 0
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0

SUBCRITERIA	Hydrology / Hydraulics	Navigable Waters	Scenic Rivers	Water Quality	Wildlife & Habitats	Water Bottoms / Benthic Resources	T & E Species	EFH
	Qualitative	**Yes/No; Extent of impacts; Perm/Temp**	**Coordination or permitting necessary (yes/no); Perm/Temp**	**Qualitative**	**Acreage of habitat by type impacted; acreage of habitat by type created**	**Acreage; Perm/Temp**	**Species; Critical habitat**	**Acreage; Species impacted / life stage; Perm/Temp**
Jesuit Bend Swamp	94 ac. open water converted to seasonally flooded soils. 0	Yes. 94 ac. open water permanently converted to swamp. Temp impact at borrow site. 0	No 0	Temporary increased turbidity. 0	94 ac. habitat for waterfowl eliminated. Same ac. habitat created for other birds & terrestrial vertebrates. +	Permanent loss of 94 ac.; 258 ac. borrow site temporarily impacted 0	No impacts by mitigation features. Pallid sturgeon could occur in borrow site. 0	Perm. impact adult/juvenile brown & white shrimp, adult/juvenile red drum and juvenile grey snapper, at 94 ac. mit site. Perm impact similar species at borrow site. --Converting waterbottoms to create mitigation could require mitigation
Lake Salvador Swamp	94 ac. open water and shoreline converted to seasonally flooded soils. Reduced wave energy & substantially reduced shoreline erosion +	Yes. 59 ac. open water permanently converted to swamp. Temp impact at borrow site. 0	No 0	Temporary increased turbidity. --*greater plume during dredging	94 ac. habitat for waterfowl eliminated. Same ac. habitat created for other birds & terrestrial vertebrates +	Permanent loss of 59 ac.; 241 ac. borrow site temporarily impacted 0	No impacts by mitigation features. 0	Perm. impact adult/juvenile brown & white shrimp, adult/juvenile red drum and juvenile grey snapper, at 94 ac. mit site. Perm impact similar species at borrow site. --Converting waterbottoms to create mitigation could require mitigation
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0

SUBCRITERIA	Aquatic / Fisheries	Prime Farmland	Cultural Resources	Recreation	Noise	Aesthetics	HTRW	Environmental Justice	Socioeconomics / Land Use
	Acres habitat created or eliminated	Yes/No; Acreage	Qualitative	Acreage & type of resource impacted; Acreage of resource improved	Residential or commercial within 1,000 feet	Qualitative	Probability of encountering HTRW	Low income / minority populations disproportionately impacted	# Impacted – comm./industrial properties; residential units; public properties. Acres ag or forest converted
Jesuit Bend Swamp	94 ac. open water eliminated. Limited fish access to restored swamp. --	No 0	Low probability for impacts. 0	94 ac. private boating, fishing, crabbing eliminated. Same ac. improved re hiking, wildlife viewing, hunting 0	Yes. Few residences present. 0	No impacts 0	Very low. One plugged and abandoned oi/gas well present. 0	No impacts 0	No impacts 0
Lake Salvador Swamp	94 ac. open water and shoreline eliminated. Limited fish access to restored swamp. --	No 0	Moderate to High probability for impacts. Cultural resource survey needed. --	94 ac. boating, fishing, crabbing eliminated. 118 ac. improved re hiking, wildlife viewing, hunting. 0	No impacts 0	No impacts 0	Very low. Two dry and plugged oil/gas wells adjacent to the site. 0	No impacts 0	No impacts 0
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0

SUBCRITERIA	Hydrology / Hydraulics	Navigable Waters	Scenic Rivers	Water Quality	Wildlife & Habitats	Water Bottoms / Benthic Resources	T & E Species	EFH
	Qualitative	**Yes/No; Extent of impacts; Perm/Temp**	**Coordination or permitting necessary (yes/no); Perm/Temp**	**Qualitative**	**Acreage of habitat by type impacted; acreage of habitat by type created**	**Acreage; Perm/Temp**	**Species; Critical habitat**	**Acreage; Species impacted / life stage; Perm/Temp**
Coleman Brackish Marsh	138 ac. open water converted to marsh. 0	Yes. 138 ac. open water permanently converted to marsh. Temp impact at borrow site. 0	No 0	Temporary increased turbidity. 0	~~165~~175 ac. Shallow open water and eroded marsh eliminated. Same ac. habitat created for other birds & terrestrial vertebrates. +	Permanent loss of 138 ac.; 348 ac. borrow site temporarily impacted 0	No impacts by mitigation features. Pallid sturgeon could occur in borrow site. 0	Perm. impact juvenile brown & white shrimp, adult/juvenile red drum and juvenile grey snapper, at 165 ac. mit site. Perm impact similar species at borrow site. 0
Defelice Brackish Marsh	245 ac. open water converted to marsh. 0	Yes. 245 ac. open water permanently converted to marsh. Temp impact at borrow site. 0	No 0	Temporary increased turbidity. 0	~~300~~ 262 ac. Shallow open water and eroded marsh habitat eliminated; ~~300~~ 262 ac. emergent marsh created increases habitat for birds. +	Permanent loss of 245 ac. water bottom but benthic organisms temp impacted. Borrow site temp impact to 348 ac. 0	No impacts by mitigation features. Pallid sturgeon could occur in borrow site. 0	Temp. impact adult/juvenile brown & white shrimp, adult/juvenile red drum and juvenile grey snapper, at 300 ac. of mit site. Perm impact similar species at borrow site. 0

SUBCRITERIA	Aquatic / Fisheries	Prime Farmland	Cultural Resources	Recreation	Noise	Aesthetics	HTRW	Environmental Justice	Socioeconomics / Land Use
	Acres habitat created or eliminated	**Yes/No; Acreage**	**Qualitative**	**Acreage & type of resource impacted; Acreage of resource improved**	**Residential or commercial within 1,000 feet**	**Qualitative**	**Probability of encountering HTRW**	**Low income / minority populations disproportionately impacted**	**# Impacted – comm./industrial properties; residential units; public properties. Acres ag or forest converted**
Coleman Brackish Marsh	138 ac. open water eliminated. 175 ac. Marsh created increases habitat diversity +*NMFS says marsh is a more productive habitat for fisheries than open water	No 0	Low probability for impacts 0	175 ac. open water, broken marsh eliminated, and improved for wildlife viewing and hunting. 0	No impacts 0	No impacts 0	Very low. Four plugged and abandoned oil/gas wells adjacent to the site. 0	No impacts 0	No impacts 0
Defelice Brackish Marsh	245 ac. open water eliminated. 262 ac. marsh created increases habitat diversity +*NMFS says marsh is a more productive habitat for fisheries than open water	No 0	Low Probability. 0	262 ac. public boating, fishing, crabbing eliminated. Same ac. possibly improved re birding, hunting. 0	No impacts 0	No impacts 0	Very low. No wells or pipelines present. 0	No impacts 0	No impacts 0

SUBCRITERIA	Hydrology / Hydraulics	Navigable Waters	Scenic Rivers	Water Quality	Wildlife & Habitats	Water Bottoms / Benthic Resources	T & E Species	EFH
	Qualitative	Yes/No; Extent of impacts; Perm/Temp	Coordination or permitting necessary (yes/no); Perm/Temp	Qualitative	Acreage of habitat by type impacted; acreage of habitat by type created	Acreage; Perm/Temp	Species; Critical habitat	Acreage; Species impacted / life stage; Perm/Temp
Cataouatche Ponds Fresh Marsh	Reduced wave energy, potential, reduced circulation in adjacent waters 0	Yes. 95 ac. open water permanently converted to marsh. Temp impact at borrow sites. 0	No 0	Temporary increased turbidity. --	104 ac. open water SAV habitat eliminated; 104 ac. emergent marsh created increases habitat for birds. +	Permanent loss of 95 ac. water bottom but benthic organisms temp impacted. Borrow site temp impact (119 ac. in Lake Cataouatche). -- SAV present (accounted for in WVA*), quality is better for benthos than GIWW site	No impacts 0	Temp. impact juvenile brown shrimp, adult/juvenile red drum and adult/juvenile white shrimp, at 104 ac. of mit site. Perm impact similar species at borrow site. 0
GIWW/Salvador Fresh Marsh	Reduced wave energy & substantially reduced shoreline erosion 0	Yes. 79 ac. open water permanently converted to marsh. Temp impact at borrow site. **0**	No 0	Temporary increased turbidity. --	152 ac. open water eroded marsh habitat eliminated; 152 ac. emergent marsh created increases habitat for birds. +	Permanent loss of 79 ac. water bottom but benthic organisms temp impacted. Borrow site temp impact to 152 ac. 0	No impacts 0	Temp. impact adult/juvenile brown & white shrimp, adult/juvenile red drum and juvenile grey snapper, at 152 ac. of mit site. Perm impact similar species at borrow site. 0
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0
ILF/Mitigation Bank	Minimal impacts from ILF/No impacts 0	Minimal impacts from ILF/No impacts 0	Unknown 0	Temporary increased turbidity for ILf 0 No Impacts for larger Bank	Minimal impacts from ILF/No impacts 0	Minimal impacts from ILF/No impacts 0	Unknown 0	Minimal impacts from ILF /No impacts 0

SUBCRITERIA	Aquatic / Fisheries	Prime Farmland	Cultural Resources	Recreation	Noise	Aesthetics	HTRW	Environmental Justice	Socioeconomics / Land Use
	Acres habitat created or eliminated	Yes/No; Acreage	Qualitative	Acreage & type of resource impacted; Acreage of resource improved	Residential or commercial within 1,000 feet	Qualitative	Probability of encountering HTRW	Low income / minority populations disproportionately impacted	# Impacted – comm./industrial properties; residential units; public properties. Acres ag or forest converted
Cataouatche Ponds Fresh Marsh	104 ac. open water and SAV eliminated. 104 ac. marsh created increases habitat diversity +	No 0	Moderate probability for impacts. Cultural resource survey needed. --	104 ac. public boating, crabbing eliminated. Same ac. possibly improved re fishing, birding. Really good Duck hunting acreage eliminated. 0	None 0	No impacts 0	Very low. No wells and no pipelines present. 0	No impacts 0	No impacts 0
GIWW/Salvador Fresh Marsh	152 ac. open water eroded marsh habitat eliminated 152 ac. marsh created increases habitat diversity 0 *creating more productive habitat but limiting access with rock (even with fish dips)	No 0	Moderate probability for impacts. Cultural resource survey needed. --	152 ac. boating, fishing, crabbing eliminated. Same ac. possibly improved re birding 0	None 0	No impacts 0	Low. One plugged and abandoned oil/gas well, one oil/gas well with expired permit, one crude-oil pipeline, and one natural-gas pipeline present. 0	No impacts 0	No impacts 0
Mitigation Bank	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0	No impacts 0
ILF/Mitigation Bank	Minimal impacts from ILF/No impacts 0	No impacts 0	unknown ILF/No impacts 0	No impacts 0	unknown ILF/No impacts 0	No impacts 0	unknown ILF/No impacts 0	unknown ILF/No impacts 0	unknown ILF/No impacts 0

Table B-5: Time to Contract Award Matrix

Project Alternative	Total Duration
BLH-Dry	
Mitigation Bank	8 months
PPG BLH Dry	2 years, 2 months
Segnette BLH Dry	3 years, 4 months
BLH-Wet	
Mitigation Bank	8 months
Jesuit Bend BLH-Wet	4 years, 8 months
The Tank BLH-Wet	2 years, 2 months
Swamp	
Mitigation Bank	8 months
Jesuit Bend Swamp	4 years, 9 months
Lake Salvador Swamp	2 years, 2 months
Brackish Marsh	
Coleman Brackish Marsh	3 years, 4 months
Defelice Brackish Marsh	3 years, 4 months
Fresh Marsh	
Cataouatche Ponds Fresh Marsh	2 years, 2 months
GIWW/Salvador Fresh Marsh	2 years, 2 months
Mitigation Bank	8 months
ILF 33% / Mitigation Bank 67%	8 months

Table B-6: Time to NCC Matrix

Project Alternative	Total Duration
BLH-Dry	
Mitigation Bank	8 months
PPG BLH Dry	3 yrs, 5 months
Segnette BLH Dry	4 yrs, 10 months
BLH-Wet	
Mitigation Bank	8 months
Jesuit Bend BLH-Wet	6 years, 11 months
The Tank BLH-Wet	5 years, 11 months
Swamp	
Mitigation Bank	8 months
Jesuit Bend Swamp	6 years, 10 months
Lake Salvador Swamp	5 years, 6 months
Brackish Marsh	
Coleman Brackish Marsh	3 years, 9 months *should go faster b/c smaller size, by a month
Defelice Brackish Marsh	3 years, 10 months *pipeline access and Jack/Bore takes longer
Fresh Marsh	
Cataouatche Ponds Fresh Marsh	2 years, 7 months
GIWW/Salvador Fresh Marsh	3 years, 11 months
Mitigation Bank	8 months
ILF 33% / Mitigation Bank 67%	8 months

Table B-7: Other Cost Considerations Matrices

BLH-Dry

	Total Project Cost
Mitigation Bank	Least Cost
PPG BLH Dry	~2% > least cost
Segnette BLH Dry	~5% > least cost

BLH-Wet

	Total Project Cost
Mitigation Bank	Least Cost
Jesuit Bend BLH-Wet	~376% > least cost
The Tank BLH-Wet	~520% > least cost

Swamp

	Total Project Cost
Mitigation Bank	Least Cost
Jesuit Bend Swamp	~487% > least cost
Lake Salvador Swamp	~913% > least cost

Brackish Marsh

	Total Project Cost
Coleman Brackish Marsh	Least Cost
Defelice Brackish Marsh	~183% > least cost

Fresh Marsh

	Total Project Cost
Cataouatche Ponds Fresh Marsh	Least Cost
GIWW/Salvador Fresh Marsh	~208% > least cost
Mitigation Bank	~34% > least cost
ILF 33% / Mitigation Bank 67%	~34% > least cost

Table B-8: Cost Effectiveness Matrices

BLH-Dry (AAAHUs/$)	
Mitigation Bank	Least Cost
PPG BLH Dry	~134% > least cost
Segnette BLH Dry	~442% > least cost
BLH-Wet CE	
Mitigation Bank	Least Cost
Jesuit Bend BLH-Wet	~388% > least cost
The Tank BLH-Wet	~460% > least cost
Swamp CE	
Mitigation Bank	Least Cost
Jesuit Bend Swamp	~423% > least cost
Lake Salvador Swamp	~780% > least cost
Brackish Marsh CE	
Coleman Brackish Marsh	Least Cost
Defelice Brackish Marsh	~50% > least cost
Fresh Marsh CE	
Cataouatche Ponds Fresh Marsh	Least Cost
GIWW/Salvador Fresh Marsh	~208% > least cost
Mitigation Bank	~47% > least cost
ILF 33% / Mitigation Bank 67%	~47% > least cost

Table B-9: Three SLR Scenario Analysis

Mitigation Site	Proposed Habitat	Mitigation Feature ID	Acres	Total Net Gain AAHUs			Mitigation Potential (AAHUs / acre)			HSI at End of Period of Analysis (forested habitats; FWP)			Variable V1 Value (%) At End of Period of Analysis (marsh habitats; FWP)		
				Low SLR	Int. SLR	High SLR	Low SLR	Int. SLR	High SLR	Low SLR	Int. SLR	High SLR	Low SLR	Int. SLR	High SLR
Plaquemines Parish Gov't	BLH-dry		93.75	37.5	37.5	37.5	0.40	0.40	0.40	0.57	0.57	0.57	Not Applicable (N/A)	N/A	N/A
Bayou Segnette	BLH-Dry		178	37.4	37.4	37.4	0.21	0.21	0.21	0.68	0.68	0.68	N/A	N/A	N/A
Jesuit Bend	BLH-Wet		203.7	122.2	122.2	121.2	0.59	0.59	0.59	0.91	0.91	0.9	N/A	N/A	N/A
The Tank	BLH-Wet		279.5	168.8	168.8	167.6	0.6	0.6	0.59	0.92	0.92	0.9	N/A	N/A	N/A
Jesuit Bend	Swamp		85.5	33.8	33.8	32.2	0.39	0.39	0.38	0.59	0.59	0.59	N/A	N/A	N/A
Lake Salvador	Swamp		85.3	35.1	35.1	30.3	0.41	0.41	0.35	0.69	0.69	0.32	N/A	N/A	N/A
Cataouatche Ponds	Fresh Marsh		98.1	53.4	51.4	41.7	0.5	0.48	0.39	N/A	N/A	N/A	100	98	63
GIWW/Salvador	Fresh Marsh		143.1	53.4	51.4	41.7	0.5	0.48	0.39	N/A	N/A	N/A	100	98	63
Coleman	Brackish Marsh		230	158.6	148.9	124	0.54	0.51	0.42	N/A	N/A	N/A	96	87	59
Defelice	Brackish Marsh		310.6	183.79	152.1	123.8	0.42	0.34	0.28	N/A	N/A	N/A	82	67	36

Table B-10. Previously Constructed Wetland or Ecosystem Restoration Projects in Barataria Basin

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
CIAP (BA-15-X2): Lake Salvador Shoreline Protection-Phase III	St Charles	2009	A shoreline protection project, located near Bayou des Allemands along the northwestern Lake Salvador shoreline, tying into the western BA-15 CWPPRA shoreline protection feature and extending approximately 1.5 miles east. *+^	No	No
CIAP (BA-36-EB): Barataria Land Bridge Dedicated Dredging	Jefferson	2010	Located along the southern shoreline of Bayous Perot and Rigolettes, the project created and or nourished approximately 1,200 acres of marsh in conjunction with CWPPRA project BA-36 (Dedicated Dredging on the Barataria Basin Landbridge). ^	No	No
CIAP (BA-43-EB): Mississippi River Long Distance Sediment Pipeline	Jefferson	2016	The deposition of dredged material from the Mississippi River by long distance pipeline from the Mississippi River to locations within central Barataria Basin for marsh creation and restoration. *+ @	No	No
CIAP (BA-58): Fringe Marsh Repair	Plaquemines	2014	This program involves the reestablishment of approximately 300 acres of critical areas of fragile marsh in lower Plaquemines Parish to help minimize the continued fragmentation of wetland systems throughout the coast. ^@	No	No
CIAP (BA-59): Waterline Booster Pump Station, West Bank	St. James	2010	The project includes the installation of a waterline booster pump station in Welcome, Louisiana along Louisiana Highway 18 on the west bank of the Mississippi River in St. James Parish. *+	No	No
CIAP (BA-161): Mississippi River Water Reintroduction Into Bayou Lafourche - BLWFD	Ascension; Assumption	2016	The implementation of features and improvements determined to be the most beneficial in order to improve the capacity of Bayou Lafourche to allow for increased flows through the bayou. The project is anticipated to benefit the Terrebonne and Barataria Basins through reductions in the salinities and/or nourishment of wetlands with the introduction and distribution of sediment and nutrients from the river. ^@ #	No	No

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
CIAP (BA-61): West Bank Wetland Conservation and Protection	St. James	2010	Acquisition and preservation of approximately 235 acres of existing wetlands along Louisiana Highway 20 in St. James Parish near the communities of South Vacherie and Chackbay to protect the natural habitat from future development. The purchase was completed in 2010. *+	No	No
CWPPRA (BA-02): GIWW to Clovelly Hydrologic Restoration	Lafourche	2000	Impede increasing salinity within the project area by the use of hydrologic restoration features such as plugs and weirs to hinder salt water intrusion and decrease marsh loss. Shoreline protection features along the Bay L'Ours were also constructed to lessen wave induced erosion and reduce marsh loss. The project is located east of the communities of Larose and Cutoff in Lafourche Parish, Louisiana and adjacent to Little Lake. *^	No	No
CWPPRA (BA03C): Naomi Outfall Management	Jefferson; Plaquemines	2002	The management of freshwater, sediment, and nutrients diverted from the Mississippi River via the Naomi Siphon (BA-03) into the project area located between the communities of Naomi/La Reusitte and Lafitte in Jefferson Parish, Louisiana including The Pen. The project goal is to decrease salinities and reduce marsh loss.*^	No	No
CWPPRA (BA-15): Lake Salvador Shoreline Protection Demonstration	St Charles	1998	The objective of this project is to maintain the integrity of an area along the northern Lake Salvador shoreline east of Baie du Cabanage and help re-establish the natural hydrology of interior marsh. Phase I of the project was constructed to demonstrate the effectiveness of four separate types of segmented breakwaters in a poor soil environment. Phase II of the project included the installation of continuous rock structure along the western section of the lake. *^	No	No

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
CWPPRA (BA-20): Jonathan Davis Wetland Restoration	Jefferson	2003; 2012	The goal of this project is to restore the natural hydrologic conditions of the area and reduce shoreline erosion. The goal was partly accomplished through constructing a series of water control structures. Additional features were constructed as part of unit 4 consisting of rock rip rap revetment, concrete sheetpile wall, plugs, and marsh creation. *^	No	No
CWPPRA (BA-23): Barataria Bay Waterway (BBWW) West Side Shoreline Protection	Jefferson	2000	The construction of approximately 1.75 miles of rock dike along the west bank of BBWW near Dupre Cut to protect the adjacent marsh from unnatural water exchange and subsequent erosion. ^	No	No
CWPPRA (BA-26): Barataria Bay Waterway (BBWW) East Side Shoreline Protection	Jefferson	2001	Construction of approximately 3.3 miles of levee and rock armor along the eastern bank of BBWW near Dupre Cut to protect the adjacent marsh from excessive tidal action and saltwater intrusion.^	No	No
CWPPRA (BA-27): Barataria Basin Landbridge Shoreline Protection, Phase 1 & 2	Jefferson; Lafourche	2009	Construction of approximately 13.5 miles of shoreline protection along the eastern bank of Bayou Rigolettes to inhibit the erosion on the southwestern shoreline of Bayou Perot and the southeastern shoreline of Bayou Rigolettes. ^	No	No
CWPPRA (BA-27C): Barataria Basin Landbridge Shoreline Protection, Phase 3 CU 7 and 8	Jefferson; Lafourche	2017	The construction of approximately 6 miles of shoreline protection along the southern end of Bayous Perot and Rigolettes confluence with Little Lake and Harvey Cutoff Canal. The project tested sections of different shoreline protection types such as concrete panel wall, rock, and light rock. Portions were constructed in 1999, 2008, and 2017. ^@	No	No
CWPPRA (BA-27D): Barataria Basin Landbridge Shoreline Protection, Phase 4	Jefferson	2006	This project consists of 6 miles of foreshore rock dike with incorporated fish passages and openings at historic natural channels to inhibit shoreline erosion and deterioration of the Barataria landbridge. ^	No	No

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
CWPPRA (BA-36): Dedicated Dredging on the Barataria Basin Landbridge	Jefferson	2010	The construction of approximately 1,211 acres of intertidal marsh utilizing dredge material in two contained marsh creation areas. In addition, material was placed in adjoining fill areas to nourish approximately 1,578 acres of marsh in conjunction with CIAP BA-36(EB). ^	No	No
CWPPRA (BA-37): Little Lake Shoreline Protection/Dedicated Dredging Near Round Lake	Lafourche	2007	This project protects approximately 4 miles of Little Lake shoreline, creates 488 acres of intertidal wetlands, and nourishes an additional 532 acres of fragmented, subsiding marsh. This project is designed to protect area wetlands, which currently experience high rates of shoreline erosion. ^	No	No
CWPPRA (BA-39): Bayou Dupont Sediment Delivery System	Jefferson; Plaquemines	2010	Dredged material from the Mississippi River near La Reussite, Louisiana was pumped into confined open water areas south of Cheniere Traverse Bayou and adjacent to the West Plaquemines non-federal levee using a pipeline conveyance system to create and restore marsh. Additional grant funded received by the State of Louisiana from The American Recovery and Reinvestment Act of 2009 (ARRA) was added to this project to create approximately 100 additional acres of marsh. *^	No	No
CWPPRA (BA-41): South Shore of the Pen Shoreline Protection and Marsh Creation	Jefferson	2012	This project involves the construction of approximately 1,000 feet of concrete pile and panel wall and 2 miles of rock revetment along the south shore of The Pen and Bayou Dupont. Dedicated dredging was used to create approximately 74 acres of marsh, and nourish an additional 107 acres of marsh, within the triangular area bounded by the south shore of The Pen, the Barataria Bay Waterway (Dupre Cut) and the Creole Gas Pipeline Canal. ^	No	No
CWPPRA (BA-42): Lake Hermitage Marsh Creation	Plaquemines	2015	The creation of approximately 438 acres of wetlands and the reduction of tidal exchange in marshes surrounding Lake Hermitage using material dredged from the Mississippi River. ^	No	No

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
CWPPRA (BA-48): Bayou Dupont Marsh and Ridge Creation	Jefferson	2016	Long distance pumping of Mississippi River sediment to create marsh, to nourish approximately 118 acres of marsh, and create 15 acres of maritime ridge. ^@	No	No
HSDRRS: HSDRRS Mitigation WBV General Protected Side BLH Wet	Lafourche	2015	Mitigation for West Bank and Vicinity Hurricane Protection Storm Damage Risk Reduction System project impacts to protected side wet bottomland hardwoods (7.27 AAHUs impacted) occurred with the purchase of 11.1 acres from Enterprise Wetlands mitigation bank in February 2015 (USACE 2017b).	No	No
LWCRPA (BA-03): Naomi Siphon Diversion	Jefferson; Plaquemines	1992	The Naomi Siphon diversion is located on the west bank of the Mississippi River near the communities of Naomi and LaReussite, Louisiana. The maximum flow capacity of the diversion is 2,100 cfs and is designed to divert freshwater, nutrients, and sediment form the Mississippi River into the adjacent wetlands near Naomi, Louisiana. *^	No	No
LWCRPA (BA-04): West Pointe a la Hache	Plaquemines	1992	The construction of siphons to divert water from the Mississippi River into the adjacent wetlands on the west side of the river near Pointe a la Hache, Louisiana at a maximum discharge of 2,100 cfs.^	Yes	Yes
LWCRPA (BA-05C): Baie De Chactas	St Charles	1990	Construction of a rock shoreline protection features between the northwest shoreline of Lake Salvador and Baie du Cabanage in order to reduce erosion, stabilize the shoreline, and inhibit shoreline breaching. *^	No	No
LWCRPA (BA-15-X1): Lake Salvador Shoreline Protection Extension	St Charles	2005	The shoreline protection project included the construction of a rock dike along the northeastern shoreline of Lake Salvador tying into the BA-15 Phase II CWPPRA project and extending approximately 2 miles northeast. The project is designed to maintain the shoreline integrity and reduce interior marsh loss. *^	No	No

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
LWCRPA (BA-16): Bayou Segnette	Jefferson	1994; 1998/99	A shoreline protection feature along a narrow strip of spoil bank and marsh which separates the Bayou Segnette Waterway from Lake Salvador and a barrier across an abandoned canal that connects the two water bodies was constructed in 1994 to reduce wave induced erosion of marsh habitats within the JLNHPP. Maintenance of the structure occurred in 1998-1999. *^	No	Yes
LWCRPA (LA-01A): Dedicated Dredging Program – Lake Salvador	St Charles	1999	The deposition of dredge material into two sites in open water areas of Baie du Cabanage within the Salvador Wildlife Management Area where narrow marsh strips exists between Lake Salvador and the bay. The project goal is the restoration of marsh habitat and the reduction of shoreline breaching into the adjacent Lake Salvador as part of the coastwide state Dedicated Dredging Program. *^	No	No
LWCRPA (LA-01B): Dedicated Dredging Program – Bayou Dupont	Jefferson	2000	The deposition of dredge material into three sites adjacent to Bayou Dupont and The Pen to nourish and/or rebuild threatened coastal marshes as part of the coastwide state Dedicated Dredging Program. ^	No	No
National Park Service/USACE: Lake Salvador Shoreline Protection 1997 Shoreline Protection	Jefferson	1997	A shoreline protection barrier was built by the USACE under the authority of the National Parks and Recreation Act of November 10, 1978 (PL 95-625) to protect the Jean Lafitte National Historical Park and Preserve lands from wave induced erosion in an area of the central eastern Lake Salvador shoreline where potential breaching was possible between the Lake Salvador shoreline and the Bayou Segnette Waterway. The wave break is approximately 8,000 feet long (USACE, 1995).	No	Yes

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
National Park Service/USACE: Lake Salvador Shoreline Protection 2005	Jefferson	2004-2005	Shoreline protection features were constructed by the USACE within the Jean Lafitte National Historical Park and Preserve along the northeastern Lake Salvador shoreline from the entrance of Bayou Bardeaux southeast along the Lake Salvador shoreline until it meets the National Park Service breakwater constructed in 1997. The goal of this project is to protect the JLNHPP lands and archaeological sites from wave induced erosion (USACE, 2004b).	No	No
National Park Service: 2002 Jean Lafitte National Historical Park & Preserve Canal Partial Back Fillings	Jefferson	2002	Jean Lafitte National Historical Park & Preserve canals backfilled in 2002 to restore marsh integrity (Haigler, 2011).	No	No
National Park Service: 2010 Jean Lafitte National Historical Park & Preserve Canal Partial Back Fillings	Jefferson	2010	Jean Lafitte National Historical Park & Preserve canals backfilled in 2010 to restore marsh integrity (Haigler, 2011).	No	No
National Park Service/USACE: Jean Lafitte National Historical Park & Preserve Beneficial Use Site	Jefferson	2011	The beneficial use of dredged material from Bayou Segnette Waterway and additional material from Algiers Canal associated with the construction of the West Closure Complex/HSDRSS were placed in the site bounded by the 1997 NPS wave break features on the west, existing marsh lands to the north and south, and the 1994 State of Louisiana BA-16 rock dike to the east. The project will provide improved shoreline stability (Minton, 2011).	No	Yes
National Park Service/USACE: Lake Salvador Shoreline Protection 2011	Jefferson	2011	Construction consisted of placement of rock on the floodside of the geocrib area and repairing existing rock dike on the Jean Lafitte National Historical Park and Preserve -along the eastern Lake Salvador shoreline adjacent to the geocrib constructed in 1997. The feature is owned by NPS (O'Cain, 2012).	No	Yes

Program	Parish	Year Constructed	Description	Direct Overlap	Extended Boundary Overlap
NRDA: Lake Hermitage Marsh Creation Increment 2 (BA-141)	Plaquemines	2014	This project will create 101 acres of marsh in conjunction with the BA-42 Lake Hermitage CWPPRA project. ^	No	No
Texaco Oil Spill Mitigation: Texaco Oil Discharge Mitigation 1991 (Netherlands Area)	St Charles	1991	Mitigation for the 1991 Texaco oil well discharge into southwestern portion of Lake Salvador. The mitigation feature was constructed in the Netherlands area and consists of a timber pile/tire breakwater approximately 835 feet in length separating the Netherlands area from Lake Cataouatche. The objective of the project is to reduce erosion and enhance submerged aquatic vegetation habitat. The breakwater is anticipated to maintain existing conditions for 50 years (USDOI, 1991).	No	Yes
US Army Corps of Engineers: Davis Pond Freshwater Diversion Structure and Guide Levees	St Charles	2002	The Davis Pond Freshwater Diversion Structure is located on the west bank of the Mississippi River near Luling, Louisiana in St Charles Parish. Approximately 19 miles of guide levees were also constructed to control the diverted freshwater, nutrients and sediments from the Mississippi River through the diversion structure into the Barataria Basin for the enhancement of the wetland habitat. The maximum flow capacity of the diversion is 10,650 cfs (USACE, 2000).	No	No
WRDA BA-01: Davis Pond Freshwater Diversion and Forced Drainage Area	Jefferson; Lafourche; Plaquemines; St Charles	2002	The management of the diverted freshwater, nutrients and sediment from the Mississippi River through the Davis Pond freshwater diversion structure into the surrounding marsh areas to maintain and enhance the ecosystem of the Barataria Basin. *^	Yes	Yes

(^Data source is CPRA 2017a; @Data source is CPRA 2017c; # Data source is CPRA 2017d; *Data source is CPRA 2012a; +Data source is CPRA 2010)

Table B-11. Reasonably Foreseeable Wetland or Ecosystem Restoration Projects in Barataria Basin

Program	Parish	Description	Direct Overlap	Extended Boundary Overlap
CWPPRA (BA-34-2): Hydrologic Restoration and Vegetative Planting in the Des Allemands Swamp	St James; Lafourche	The construction of spoil bank gaps, culverts, and other hydrologic improvements for the impounded swamps in Des Allemands to improve swamp health by restoring the natural hydrologic regime and thus adding nutrients to adjacent swamp areas via hydrologic restoration. Construction began in August 2016 and is anticipated for completion in June 2017. ^	No	No
CWPPRA (BA-164): Bayou Dupont Sediment Delivery - Marsh Creation #3 and Terracing	Jefferson; Plaquemines	This project involves dedicated dredging from the Mississippi River to create and nourish 415 acres of marsh. Construction began in April 2016 and is anticipated for completion in May 2017. ^@	No	No
HSDRRS: HSDRRS Mitigation WBV General Protected Side BLH Dry	Jefferson	Mitigation for West Bank and Vicinity Hurricane Storm Damage Risk Reduction System project impacts to protected side dry bottomland hardwoods (193 AAHUs impacted) will occur at Avondale Gardens and involves enhancing 920 acres of an existing degraded BLH habitat. The proposed feature is located on the Westbank of Jefferson Parish, Louisiana near Bayou Segnette State Park. Construction contract was awarded in September 2016 and is anticipated for completion April 2019 (USACE 2017b, USACE 2017c).	No	No
HSDRRS: HSDRRS Mitigation WBV General Floodside BLH Wet and Swamp Restoration	Lafourche	The recommended projects for mitigating West Bank and Vicinity Hurricane Storm Damage Risk Reduction System project impacts to floodside (FS) wet bottomland hardwoods (BLH-Wet) and swamp are currently located at Lake Boeuf (PIER 37). However, these projects are experiencing implementation problems and new options to mitigate the FS BLH-Wet and swamp impacts are under consideration. A supplemental NEPA document will be released in the near future presenting the options considered to mitigate this outstanding requirement (USACE 2017b).	No	No

HSDRRS: HSDRRS Mitigation WBV General Floodside and John Lafitte National Historical Park and Preserve (JLNHPP) /404c Fresh Marsh Restoration	Jefferson	Mitigation for West Bank and Vicinity Hurricane Storm Damage Risk Reduction System project impacts to floodside fresh marsh (68.95 AAHUs impacted which includes 3.03 AAHUs of impact to JLNHPP) to occur at two separate locations within JLNHPP. One site is located in an open water area of Yankee Pond, and the second site is located along the eastern shoreline of Lake Salvador (geocrib) where prior work has largely established a marsh platform that was previously an open water portion of the lake. Notice to Proceed was granted in April 2017 and anticipated construction completion date for both projects is January 2019 (USACE 2017b, USACE 2017c).	No	Yes (JLNHPP geocrib mitigation site)
HSDRRS: HSDRRS Mitigation WBV JLNHPP Park/404c Floodside BLH-Wet Restoration	Jefferson; Lafourche	Mitigation for West Bank and Vicinity Hurricane Storm Damage Risk Reduction System project impacts to JLNHPP/Bayou aux Carpes 404c area floodside wet bottomland hardwood (3.12 AAHUs impacted) to occur within the JLNHPP near the WBV levee and the community of Estelle. The project would involve restoring BLH-Wet habitat from open water areas and would produce approximately 5.2 AAHUs of BLH-Wet benefits. This would satisfy the 3.12 AAHUs of WBV HSDRRS construction impacts, the 0.97 AHHUs of impact from construction of the JLHNNP swamp mitigation feature, and the 1.06 AAHUs of impact from the 2007 encroachments (USACE 2015). Notice to Proceed was granted in July 2016 with an anticipated construction completed by July 2017 (USACE 2017b).	No	No
HSDRRS: HSDRRS Mitigation WBV JLNHPP Park/404c Floodside Swamp Restoration	Jefferson; Lafourche	Mitigation for West Bank and Vicinity Hurricane Storm Damage Risk Reduction System project impacts to Jean Lafitte National Historical Park and Preserve (JLNHPP)/Bayou aux Carpes 404c area swamp (7.19 AAHUs impacted) to occur within the JLNHPP along the north side of the Millaudon and Horseshoe Canals near the WBV levee. Existing spoil berms will be gapped to improve exchange of surface water between swamp habitats in the area (USACE 2015). The project would involve restoring hydrologic connection and natural sheet flow across existing impounded swamp habitat to compensate for Park/404c swamp impacts. The project would produce approximately 8.4 AAHUs of swamp benefits on JLNHPP. Notice to Proceed was granted in July 2016 with an anticipated construction completed by July 2017 (USACE 2017b).	No	No

HSDRRS: Previously Authorized Mitigation WBV	Jefferson; St Charles	Mitigation for Pre-Katrina West Bank and Vicinity Hurricane Protection project impacts by land acquisition, preservation, and management of lands along the St Charles Parish ridge and adjacent to Bayou Segnette State Park. Bayou Segnette mitigation construction was awarded in September 2014 and is anticipated for construction completion by June 2017. St Charles land acquisition scheduled for completion by May 2017 and anticipated contract to be awarded by December 2017 (USACE 2017b).	No	No
WRDA (BA-191): Spanish Pass Ridge and Marsh Restoration	Plaquemines	Construction of approximately 1 mile of ridge backed by approximately 500-foot wide marsh platform that would serve as a means to reduce wave energy on the leeward side of the marsh through the use of dredge material. ^ This project is part of the Louisiana Coastal Area, Beneficial Use of Dredged Material Program. Construction is scheduled to begin in June 2017 and is anticipated to be complete by August 2018. @	No	No

(^Data source is CPRA 2017a; @Data source is CPRA 2017c; # Data source is CPRA 2017d; *Data source is CPRA 2012a; +Data source is CPRA 2010)

Table B-12. Additional Authorized Projects in Barataria Basin

Program	Parish	Description	Direct Overlap	Extended Boundary Overlap
Louisiana DOTD/FHWA: Future I-49 South, Raceland to the Westbank Expressway (700-92- 0011)	St Charles; Lafourche	Proposed construction of an elevated extension to US Interstate 49 South along the US 90 corridor from the Louisiana Highway 1 interchange in Raceland, Louisiana to the Westbank Expressway near Ames Boulevard in Marrero, Louisiana. The project also includes the connection of the southern terminus of US Interstate 310 with US Interstate 49. The Record of Decision for the project was signed in January 2008 (USDOT, 2008).	No	No
US Department of Justice: St Charles Levee Conservation Easement	St Charles	St Charles Levee Conservation Easement was authorized and created in 1999 by the U.S. Department of Justice as a conservation area resulting from a federal settlement with Rathborne Land Company to resolve allegations of unpermitted development of wetlands (Scallan, 2010).	No	No

Table B-13: Plant Species Found in Barataria Basin

Common Name	Scientific Name
Alligator weed	*Althernantera philoxeroides*
American elm	*Ulmus americana*
American sycamore	*Platanus occidentalis*
Bald cypress	*Taxodium distichum*
Beggar-tick	*Bidens* sp.
Bermuda grass	*Cynodon dactylon*
Bigleaf marsh-elder	*Iva frutescens*
Black mangrove	*Avicennia germinans*
Black needle rush	*Juncus roemerianus*
Black willow	*Salix nigra*
Boxelder	*Acer negundo*
Bulltongue	*Sagittaria lancifolia*
Buttonbush	*Cephalanthus occidentalis*
California bullwhip	*Scirpus californicus*
Cattail	*Typha latifolia*
Cedar elm	*Ulmus crassifolia*
Chairmaker's bulrush	*Scirpus americanus*
Chinese tallow	*Triadica sebifera*
Coast cockspur	*Echinochloa walteri*
Common persimmon	*Diospyros virginiana*
Common salvinia	*Salvinia minima*
Coontail	*Ceratophyllum demersum*
Cutgrass	*Zizaniopsis miliaceae*
Duckweed	*Lemna sp.*
Dwarf spikerush	*Eleocharis parvula*
Eastern baccharis	*Baccharis halimifolia*
Eastern cottonwood	*Populus deltoides*
Eurasian watermilfoil	*Myriophyllum spicatum*
Green ash	*fraxinus pennsylvanica*
Hackberry	*Celtis occidentalis*
Honey locust	*Gleditsia triacanthos*
Iris	*Iris sp.*
Maidencane	*Panicum hemitomon*
Needlegrass rush	*Juncus roemerianus*
Nuttall oak	*Quercus nuttallii*
Olney’s three square bulrush	*Schoenoplectus americanus*
Pickerelweed	*Pontederia cordata*
Pignut hickory	*Carya glabra*
Planertree	*Planera aquatica*
Rattlebox	*Sesbania drummondii*
Red maple	*Acer rubrum*
Red mulberry	*Morus rubra*
Reeds	*Phragmites* sp.
Rushes	*Juncus sp.*

Saltgrass	*Distichlis spicata*
Saltmarsh bulrush	*Bolboschoenus robustus*
Saltmeadow cordgrass	*Spartina patens*
Sago pondweed	*Stuckenia pectinata*
Sawgrass	*Cladium jamaicense*
Sedges	*Carex sp.*
Smooth cordgrass	*Spartina alterniflora*
Southern live oak	*Quercus virginiana*
Sugarberry	*Celtis laevigata*
Sweetgum	*Liquidambar styraciflua*
Turtleweed	*Batis maritima*
Water hyacinth	*Eichhornia crassipes*
Water lily	*Nymphaea odorata*
Water oak	*Quercus nigra*
Water primrose	*Ludwigia peploides*
Water tupelo/tupelogum	*Nyssa aquatica*
Wild rice	*Zizania aquatica*
Yellow cowpea	*Vigna luteola*

Table B-14: Common Wildlife Species Found in the Barataria Basin

Common Name	Scientific Name
American alligator	*Alligator missippiensis*
American beaver	*Castor canadensis*
American coot	*Fulica americana*
American crow	*Corvus brachyrhynchos*
American eel	*Anguilla rostrata*
American kestrel	*Falco sparverius*
American white pelican	*Pelecanus erythrorhynchos*
American widgeon	*Anas americana*
Bald eagle	*Haliaeetus leucocephalus*
Banded water snake	*Nerodia fasciata*
Barred owl	*Strix varia*
Belted kingfisher	*Ceryle alcyon*
Black skimmer	*Rynchops niger*
Black-necked stilt	*Himantopus mexicanus*
Blue jay	*Cyanocitta cristata*
Blue-winged teal	*Anas discors*
Boat-tailed grackle	*Quiscalus major*
Bobcat	*Lynx rufus*
Brazilian free-tailed bat	*Tadarida brasiliensis*
Bronze frog	*Rana clamitans*
Brown pelican	*Pelecanus occidentalis*
Bufflehead	*Bucephala albeola*
Bullfrog	*Rana catesbeiana*
Carolina wren	*Thryothorus ludovicianus*
Cattle egret	*Bubulcus ibis*
Clapper rail	*Rallus longirostris*
Common grackle	*Quiscalus quiscula*
Common moorhen	*Gallinula chloropus*
Common snapping turtle	*Chelydra serpentine*
Common yellowthroat	*Geothlypis trichas*
Cotton mouse	*Peromyscus gossypinus*
Coyote	*Canis latrans*
Diamondback terrapin	*Malaclemys terrapin*
Double-crested cormorant	*Phalacrocorax auritus*
Eastern pipistrelle	*Pipistrellus subflavus*
Eastern cottontail rabbit	*Sylvilagus floridanus*
Eastern wood-pewee	*Contopus virens*
Evening bat	*Nycticeius humeralis*
Feral hog	*Sus scrofa*
Forster’s tern	*Sterna forsteri*
Fox squirrel	*Sciurus niger*
Fulvous harvest mouse	*Reithrodontomys fulvescens*
Gadwall	*Anas strepera*

Glossy ibis	*Plegadis falcinellus*
Gray fox	*Urocyon cinereoargenteus*
Gray squirrel	*Sciurus carolinensis*
Great blue heron	*Ardea Herodias*
Great egret	*Casmerodius albus*
Greater yellowlegs	*Tringa melanoleuca*
Great horned owl	*Bubo virginianus*
Grebe	*Podilymbus sp.*
Green anole	*Anolis carolinensis*
Green-backed heron	*Butorides striatus*
Green sea turtle	*Chelonia mydas*
Green treefrogs	*Hyla cinerea*
Green-winged teal,	*Anas crecca*
Ground skink	*Scincella lateralis*
Gulf coast toad	*Bufo valliceps*
Gull-billed tern	*Sterna nilotica*
Herring gull	*Larus argentatus*
Hispid cotton rat	*Sigmodon hispidus*
Hooked Mussel	*Ischadium recurvum*
House mouse	*Mus musculus*
Kemp’s ridley sea turtle	*Lepidochelys kempii*
Killdeer	*Chardrius vociferous*
Lane snapper	*Lutjanus synagris*
Laughing gull	*Larus atricilla*
Lesser scaup	*Aythya affinis*
Lesser yellowlegs	*Tringa flavipes*
Loggerhead sea turtle	*Caretta caretta*
Longnose gar	*Lepisosteus osseus*
Lesser Scaup	*Aythya affinis*
Mallard	*Anas platyrhyncos*
Marsh rice rat	*Oryzomys palustris*
Marsh wren	*Cistothorus palustris*
Mink	*Mustela vison*
Mottled duck	*Anas fulvigula*
Mourning Dove	*Zenaida macroura*
Muskrat	*Ondatra zibethicus*
Nine-banded armadillo	*Dasypus novemcinctus*
Northern cardinal	*Cardinalis cardinalis*
Northern harrier	*Circus cyaneus*
Northern mockingbird	*Mimus polyglottos*
Northern pintail	*Anas acuta*
Northern raccoon	*Procyon lotor*
Northern Shoveler	*Anas clypeata*
Northern yellow bat	*Lasiurus intermedius*
Norway rat	*Rattus norvegicus*
Nutria	*Myocastor coypus*

Olivaceous cormorant	*Phalacrocorax brasilianus*
Opposum	*Didelphis virginiana*
Pig frog	*Rana grylio*
Rafinesque's big-eared bat	*Plecotus rafinesquii*
Red bat	*Lasiurus borealis*
Red-breasted merganser	*Mergus serrator*
Red-eared slider	*Trachemys scripta*
River otter	*Lutra canadensis*
Red fox	*Vulpes vulpes*
Redhead	*Aythya americana*
Red-shouldered hawk	*Buteo lineatus*
Red-tailed hawk	*Buteo jamaicensis*
Red-winged blackbird	*Agelaius phoeniceus*
Ring-billed gull	*Larus delawarensis*
Ring-necked duck	*Aythya collaris*
Roof rat	*Rattus rattus*
Seaside sparrow	*Ammodramus maritimus*
Snowy egret	*Egretta thula*
Southern leopard frog	*Rana sphenocephala*
Squirrel treefrogs	*Hyla squirella*
Stinkpot	*Sternotherus odoratus*
Striped skunk	*Mephitis mephitus*
Swamp rabbit	*Sylvilagus aquaticus*
Tricolored heron	*Egretta tricolor*
West Indian manatee	*Trichechus manatus*
Western cottonmouth	*Agkistrodon piscivorus*
White-eyed vireo	*Vireo griseus*
White-faced ibis	*Plegadis chihi*
White-footed mouse	*Peromyscus leucopus*
White ibis	*Eudocimus albus*
White-tail deer	*Odocoileus virginianus*
Willet	*Tringa semipalmata*
Wood duck	*Aix sponsa*
Yellow-crowned night-heron	*Nycticorax violaceus*

Table B-15: Project Parishes and LA Threatened and Endangered Species

Species	Parish	Critical Habitat	Status	Jurisdiction	
				USFWS	NFMS
Animal					
*West Indian Manatee (*Trichechus manatus*)	J, L, Pl, St. C,		T	X	
Gulf sturgeon (*Acipenser oxyrinchus desotoi*)	J, L, Pl, St. C,		T	X	X
*Pallid sturgeon (*Scaphirhynchus albus*)	J, Pl, St. C		E	X	
Piping plover (*Charadrius melodus)*	J, L, Pl	X	T	X	
Red knot *(Calidris canutus)*	J, L, Pl		T	X	
Green Sea Turtle (*Chelonia mydas*)	J, L, Pl		T	X	X
Hawksbill Sea Turtle (*Eretomchelys imbricata*)	J, L, Pl		E	X	X
Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)	J, L, Pl		E	X	X
Leatherback Sea Turtle (*Dermochelys coriacea*)	J, L, Pl		E	X	X
Loggerhead Sea Turtle (*Caretta caretta*)	J, L, Pl		T	X	X

Table B-16: Fish and Aquatic Species Found in the Barataria Basin

Common Name	Scientific Name
Atlantic croaker	*Micropogonias undulatus*
American oyster	*Crassostrea virginica*
Asiatic clam	*Corbicula fluminea*
bay anchovy	*Anchoa mitchilli*
bighead carp	*Hypophthalmichthys nobilis*
black drum	*Pogonias cromis*
blue crab	*Callinectes sapidus*
blue catfish	*Ictalurus furcatus*
bluegill	*Lepomis macrochirus*
bowfin	*Amia calva*
brown shrimp	*Farfantepenaeus aztecus*
smallmouth buffalo	*Ictiobus bubalus*
channel catfish	*Ictalurus punctatu* s
common carp	*Cyprinus carpio*
crawfish	*Procambarus sp.*
freshwater drum	*Aplodinotus grunniens*
gizzard shad	*Dorosoma cepedianum*
grass carp	*Ctenopharyngodon idella*
gray snapper	*Lutjanus griseus*
Gulf menhaden	*Brevoortia patronus*
Gulf sturgeon	*Acipenser oxyrinchus desotoi*
hardhead catfish	*Ariopsis felis*
inland silverside	*Menidia beryllina*
Lane snapper	*Lutjanus synagris*
largemouth bass	*Micropterus salmoides*
least killifish	*Heterandria formosa*
longnose gar	*Lepisosteus osseus*
mosquitofish	*Gambusia affinis*
paddlefish	*Polyodon spathula*
pallid sturgeon	*Scaphirhynchus albus*
pink shrimp	*Farfantepenaeus duorarum*
rainwater killifish	*Lucania parva*
redear sunfish	*Lepomis microlophus*
redfish/ red drum	*Sciaenops ocellatus*
ribbed mussel	*Geukensia demissa*
Rio Grande cichlid	*Cichlasoma cyanoguttatum*
sand seatrout	*Cynoscion arenarius*
sailfin molly	*Poecilia latipinna*
sheepshead	*Archosargus probatocephalus*
sheepshead minnow	*Cyprinodon variegatus*
shortnose gar	*Lepisosteus platostomus*
shovelnose sturgeon	*Scaphirhynchus platorynchus*
silver carp	*Hypophthalmichthys molitrix*

southern flounder	*Paralichthys lethostigma*
Spanish mackerel	*Scomberomorus maculatus*
spot	*Leiostomus xanthurus*
spotted gar	*Lepisosteus oculatus*
spotted seatrout	*Cynoscion nebulosus*
striped mullet	*Mugil cephalus*
warmouth	*Lepomis gulosus*
white shrimp	*Litopenaeus setiferus*
Yellow bass	*Morone mississippiensis*
yellow bullhead	*Ameiurus natalis*
zebra mussel	*Dreissena polymorpha*

Table B-17. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 ft., U. S. Dept. of Trans. study 1979	Average Noise Level (dBA) 50 ft., CA/T Project study 1994	Typical Noise Level (dBA) 50 ft., U. S. Dept. of Trans. study 1995	Lmax Noise (dBA) 50 ft., CA/T Project Spec. 721.560
Air Compressor		85	81	80
Backhoe	84	83	80	80
Chain Saw				85
Compactor	82		82	80
Compressor	90	85		80
Concrete Truck		81		85
Concrete Mixer			85	85
Concrete Pump			82	82
Concrete Vibrator			76	80
Crane, Derrick	86	87	88	85
Crane, Mobile		87	83	85
Dozer	88	84	85	85
Drill Rig		88		85
Dump Truck		84		84
Excavator				85
Generator	84	78	81	82
Gradall		86		85
Grader	83		85	85
Hoe Ram		85		90
Impact Wrench			85	85
Jackhammer*		89	88	85

Loader	87	86	85	80
Paver	80		89	85
Pile Driver, Impact		101	101	95
Pile Driver, Sonic			96	95
Pump	80		85	77
Rock Drill			98	85
Roller			74	80
Scraper	89		89	85
Slurry Machine		91		82
Slurry Plant				78
Truck	89	85	88	84
Vacuum Excavator				85

* There are 82 dBA @ 7 meter rated jackhammers (90 lb. class) available. This would be equivalent to 74 dBA @ 50 ft. These are silenced with molded intricate muffler tools.