

11th Annual Status Report on U.S. Army Corps of Engineers Construction Projects Requiring Mitigation under Section 906 of the Water Resources Development Act of 1986

As required by section 2036(b)
Water Resources Development Act of 2007, as amended

FEBRUARY 2019



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INTRODUCTION

This 11th Annual Status Report on U.S. Army Corps of Engineers (Corps) Construction Projects Requiring Mitigation was prepared in response to Section 2036(b) of the Water Resources Development Act (WRDA) of 2007, as amended. Data for this report are presented in three tables and will be included in the Fiscal Year (FY) 2020 Civil Works Budget press book.

TABLE 1. – Corps Projects under Construction during FY 2018. Table 1 lists 441 in FY 2018 in the Construction Account or Mississippi River and Tributaries Construction Accounts. Programs such as the various environmental infrastructure authorities are represented by one line item.

TABLE 2. - Status of Corps Projects with Ongoing Compensatory Mitigation. In FY2018, 71 of the 441 projects in Table 1 had ongoing compensatory mitigation actions. If a project met compensatory mitigation requirements in a previous year and is still under construction, it is not included in Table 2. Table 2 includes compensatory mitigation projects pending acquisition of all required lands, pending initial construction of the mitigation actions, and/or constructed mitigation actions that are currently being monitored to confirm the mitigation action is functioning successfully as defined by project specific performance criteria. The number of acres listed under the column heading “Mitigation Total Acres of Land Acquired” are acres of land available to mitigate adverse project impacts through either construction of compensatory mitigation actions or preservation of at risk habitat as compensatory mitigation. It may include lands that have been purchased in fee to provide mitigation; are within existing Corps project boundaries or mitigation banks; have been made available by other agencies; or are located below mean low water in coastal areas. For some projects, the mitigation listed includes actions required to meet the Endangered Species Act of 1973 (ESA), as amended, as well as, section 906 of WRDA 1986, as amended. Projects that were initiated prior to section 906 of WRDA 1986 but required mitigation are included in Table 2 and noted accordingly.

TABLE 3 – Table 3 lists four projects that were determined to have successfully completed compensatory mitigation requirements in FY2018 and a summary of the required formal consultation with Federal and state resource agencies. Mitigation is considered complete and “successful” when the Major Subordinate Command (MSC)/Division Commander determines the mitigation is successful based on monitoring results and the results of the consultation with the appropriate agencies regarding mitigation success as required by section 2036 (a)(4) of WRDA 2007.

In addition to the four compensatory mitigation actions completed in FY2018, one project completed compensatory mitigation requirements in FY2016 but was not reported in the FY2016 report. The project is included in Table 3 and noted in below section on Corrections and Notes for Future Reports.

FY2020 CIVIL WORKS BUDGET PRESS BOOK. The FY2020 press book contains a listing of all projects for which the President requests funding for the next fiscal year.

SUMMARY OF FY2018 COMPLETED COMPENSATORY MITIGATION ACTIONS:

Four projects were determined to have successfully completed compensatory mitigation requirements in FY2018.

- 1) West Tennessee Tributaries, TN project (Mississippi Valley Division) required 32,000 acres of compensatory mitigation for a flood control project along the Obion and Forked Deer Rivers and tributaries in Tennessee. Approximately 42% of the project was constructed prior to shut down for reevaluation; and 42.4% of the required lands for mitigation was acquired. The unconstructed portion of this project has been deauthorized in Section 1324 of WRDA 2018 and no further mitigation is needed. Approximately 13,567 acres were purchased and turned over to the Tennessee Wildlife Resources Agency (TWRA). Mitigation requirements are determined to be complete and successful.
- 2) Tennessee -Tombigbee Waterway (Bevill Cross Current), AL project (South Atlantic Division) has completed a three-part mitigation plan. The plan includes 1) preservation of 12 acres of predominantly bottomland hardwoods (BLH) and wetlands of similar quality to those impacted, 2) control and removal of invasive/exotic species from 16 acres of Corps controlled surface waters, and 3) enhancement of 22 acres of BLH through control of invasive/exotic species on Corps controlled reserve properties not currently bound by previous management agreements. The project site office located and purchased appropriate mitigation lands for functional replacement of the impacted habitat as compensatory mitigation for the Bevill Cross Current project and associated impacts to 50 acres of wildlife mitigation lands, BLH and emergent vegetation due to dredging and disposal activities. Construction of this project was completed in late 2010. Annual surveying and monitoring were performed in August and October 2017 for spot treatment of invasive species to prevent re-infestation and herbicide treatments performed. Based upon the close coordination with the U.S. Fish and Wildlife Service (USFWS) and their response letter of February 28, 2018, the mitigation requirements have been satisfied to offset the impacts of removing a portion of the island and dredging; removing dogleg and 100 feet of existing spur dike; dredging the upper approach; and constructing a system of nine submerged bendway weirs. The USFWS concurred with the mitigation (i.e. habitat quality). These lands will be actively managed (i.e. herbicide treatment) by the Corps in perpetuity.
- 3) Wilmington Harbor, NC project (South Atlantic Division) has completed required mitigation with the following actions: (1) Restoration of 30.4 acres primary nursery (marsh and intertidal habitat) at Cape Fear River dredged material disposal Island-13. This restoration component was deemed successful in 2005 after 3 years of monitoring. (2) Prevention of Degradation (POD) Lands - 700 acres of riparian wetland habitat buffer were acquired on the Northeast Cape Fear River, including

river shoreline & two tributaries (Tony's and Lagoon Creeks). Acquisition protects 29 acres of estuarine primary nursery area. These POD lands were acquired in June 2011. (3) Fish passage at Cape Fear River Lock & Dam #1 by construction of rock rapids downstream of dam to aid anadromous fish passage. Construction was completed in November 2012. (4) Tidal Freshwater Marsh Credits - 35.5 credits have been purchased from the Lower Cape Fear Umbrella Mitigation Bank. All mitigation is complete and coordination with applicable resource agencies has occurred. No further monitoring is required.

- 4) Southwest Valley Albuquerque, Riparian Mitigation, NM project (South Pacific Division) was required for construction of a spillway channel to the Rio Grande as it necessitated the removal of approximately 60 mature cottonwood trees. Mitigation entailed replacing each mature tree with 10 saplings at nearby locations. Ten additional trees were required as the contractor went outside of the project boundary. The success criteria was a mean survival rate of 80% across all planting areas for five years after planting. All 700 of cottonwood saplings required were planted in 2012 at four mitigation locations. Monitoring has been completed with monitoring activities beginning in July 2012, and conducted annually through 2017. Due to lower success rates found during the 2013 monitoring, it was initially thought that replacement trees might be necessary. Based on further monitoring, however, replacements were not required since the original trees continued to thrive. Mitigation success has been achieved.

CORRECTIONS AND NOTES FOR FUTURE REPORTS

- 1) Manteo (Shallowbag) Bay, Wanchese Harbor, NC (South Atlantic Division). Mitigation was completed in 2016 for project components that had been constructed, which involved deepening of Wanchese Harbor. Mitigation for this project component was 42 acres of oyster reef habitat. This 42-acre mitigation requirement was satisfied in October 2016 via mitigation credits (Estuarine Subtidal Reef-Mollusk habitat) purchased through the North Carolina Division of Mitigation Services. This project will be removed from future mitigation reports until such time that this construction project is returned to active status for further implementation.
- 2) Martin County, 3rd Periodic Renourishment, FL project (South Atlantic Division). The project had mitigation requirements that were based upon post-construction monitoring. The original project had mitigation for direct/indirect nearshore hard bottom impacts of beach renourishment and consisted of creation of nearshore artificial reef with concrete rubble. After the third periodic renourishment in 2013, post-construction monitoring of nearshore hard bottom habitat indicated that no secondary or indirect impacts occurred down drift of the project area or outside of the equilibrium-to-of-fill that have not been previously mitigated for. Per consultation with state and federal natural resource agencies, no mitigation was required for the third periodic renourishment. This project will be removed from future mitigation reports.
- 3) East Baton Rouge Parish (Amite River and Tributaries), LA project (Mississippi

Valley Division). This project has not had a project cost sharing agreement executed and no progress has been made toward project implementation. A new study called Amite River and Tributaries is underway and a Chief's Report is scheduled for 2021. As the existing authorized project is not being pursued for implementation, this project will be removed from future mitigation reports.

- 4) Arkansas River Navigation, AR and OK (Southwestern Division). The project had not received funding for several years to begin construction phase. Therefore it is being moved into inactive status. As such, mitigation is not being constructed either. This project will be removed from future mitigation reports until such time that this construction project is returned to active status for implementation.
- 5) Inner Harbor Navigation Lock, LA (Mississippi Valley Division). Construction of this project is on hold due to a court order. A General Reevaluation Report (GRR) and Supplemental Environmental Impact Statement (SEIS) are under preparation. The analysis in the current feasibility-level study (GRR/SEIS) indicates that no compensatory mitigation for fish, wildlife, and wetlands resources are required for the reformulated project. A draft GRR/SEIS was released for public review and comment on January 6, 2017. The final report will be submitted to Corps Headquarters in FY 2019. This project will be removed from future mitigation reports until such time as the revised project is approved and mitigation requirements known.

PROGRAMMATIC MITIGATION ACTIONS

Some mitigation features reported are being managed programmatically, over the geographic scope of the system, and while individual elements are tracked separately, from a system-wide perspective the mitigation is progressing concurrently with construction. Two of these programs include the Mississippi River Levees Program and the Sacramento River Bank Protection Project (SRBPP).

The SRBPP is a continuing construction project authorized by the Flood Control Act of 1960. The current authorization allowed for 405,000 linear feet of bank protection along the Sacramento River and its tributary levees ranging from toe and upper bank riprap placement, stabilization by planting, installation of in-stream woody material, and construction of setback levees on the land side of existing levees. As of 2018, approximately 401,000 linear feet of bank protection has been constructed. Mitigation is being implemented to reduce potentially significant effects identified in biological opinions (BO's) issued by the USFWS and National Marine Fisheries Service (NMFS), and pursuant to the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act (FWCA) and the Clean Water Act (CWA). The reaches that required mitigation are identified by River Miles (RM) on the Sacramento River and its tributaries. Most mitigation and monitoring has been completed with the exception of Sacramento RM 26.0 Left (L), RM 16.8L, RM 71.3 Right (R), Feather River RM 7.0L, and Lower American River RM 10.0L. Most of the construction and mitigation are complete, except for limited follow up to meet established success criteria. Section 3031 of the WRDA of 2007 authorized an

additional 80,000 linear feet of bank protection. The Sacramento District is finalizing a post authorization change report including ESA consultation to support implementation of the additional linear footage expected to begin in fiscal year 2021.

The Mississippi River Levees and Seepage Control Project is a regional project (Memphis, Vicksburg and New Orleans Districts) within Mississippi Valley Division. The Regional Project Manager is located in the Vicksburg District and has overall responsibility for regional management across the project. However individual flood risk management construction items and associated mitigation are developed, delivered and reported in the mitigation database by each district. Total mitigation in the 1998 SEIS was estimated at 5,863 acres across all three Districts. Although an individual district may be behind on their mitigation requirement, mitigation for the entire regional project is ahead of construction completed. To date approximately 97 percent of mitigation has been delivered. Additional mitigation requirements are being assessed in a SEIS scheduled to be completed in July 2020.

CONCLUSION

In comparing the percentage of mitigation completed to the percentage of construction completed in Table 2, mitigation activities are occurring concurrently with impacts from construction activities, in accordance with section 906 of WRDA 1986, as amended. For the projects with compensatory mitigation trailing physical project construction, the NEPA decision documents for the majority of these actions required mitigation to occur post-construction after a determination of actual project impacts. Since FY2008, 45 projects have successfully met compensatory mitigation requirements and an additional 37 projects have completed construction of the compensatory mitigation and are currently undergoing post-construction monitoring to confirm ecological performance metrics are successfully met.

USACE Major Subordinate Commands (MSCs) and Districts

Acronym	Major Subordinate Command (MSC)/District
LRD	GREAT LAKES AND OHIO RIVER DIVISION
LRB	BUFFALO DISTRICT
LRC	CHICAGO DISTRICT
LRE	DETROIT DISTRICT
LRH	HUNTINGTON DISTRICT
LRL	LOUISVILLE DISTRICT
LRN	NASHVILLE DISTRICT
LRP	PITTSBURGH DISTRICT
MVD	MISSISSIPPI VALLEY DIVISION
MVK	VICKSBURG DISTRICT
MVM	MEMPHIS DISTRICT
MVN	NEW ORLEANS DISTRICT
MVP	ST PAUL DISTRICT
MVR	ROCK ISLAND DISTRICT
MVS	ST LOUIS DISTRICT
NAD	NORTH ATLANTIC DIVISION
NAB	BALTIMORE DISTRICT
NAE	NEW ENGLAND DISTRICT
NAN	NEW YORK DISTRICT
NAO	NORFOLK DISTRICT
NAP	PHILADELPHIA DISTRICT
NWD	NORTHWESTERN DIVISION
NWK	KANSAS CITY DISTRICT
NWO	OMAHA DISTRICT
NWP	PORTLAND DISTRICT
NWS	SEATTLE DISTRICT
NWW	WALLA WALLA DISTRICT
POD	PACIFIC OCEAN DIVISION
POA	ALASKA DISTRICT
POH	HONOLULU DISTRICT
SAD	SOUTH ATLANTIC DIVISION
SAJ	JACKSONVILLE DISTRICT
SAM	MOBILE DISTRICT
SAS	SAVANNAH DISTRICT
SAW	WILMINGTON DISTRICT
SAC	CHARLESTON DISTRICT
SPD	SOUTH PACIFIC DIVISION
SPA	ALBUQUERQUE DISTRICT
SPK	SACRAMENTO DISTRICT
SPL	LOS ANGELES DISTRICT
SPN	SAN FRANCISCO DISTRICT
SWD	SOUTHWESTERN DIVISION
SWF	FT WORTH DISTRICT
SWG	GALVESTON DISTRICT
SWL	LITTLE ROCK DISTRICT
SWT	TULSA DISTRICT

TABLE ACRONYMS

AAHU	Average annual habitat unit
ac	acres
BiOp	Biological Opinion (Section 7 of the ESA)
BLH	Bottomland Hardwoods
CWA	Clean Water Act
DEP	Department of Environmental Protection
DFWR	Department of Fish and Wildlife Resources
DNR	Department of Natural Resources
DOI	Department of Interior
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	US Environmental Protection Agency
ERDC	US Army Corps of Engineers, Engineering Research and Development Center
ESA	Endangered Species Act of 1973, as amended
FONSI	Finding of No Significant Impact
FRM	Flood Risk Management
ft	feet
FWCA	Fish and Wildlife Coordination Act
FY	Fiscal Year
HTRW	Hazardous Toxic and Radioactive Waste
IER	Individual Environmental Report
IWM	In-water Woody Material
lf	linear feet
LRR	Limited Re-evaluation Report
m	miles
M	million
NED	National Economic Development
NEPA	National Environmental Policy Act
NER	National Ecosystem Restoration
NFS	Non-Federal Sponsor
NFL	Non-Federal Levee
NMFS	National Marine Fisheries Service
O&M	Operations and Maintenance
PACR	Post Authorization Change Report
PED	Pre-construction Engineering and Design
RM	River Mile
ROD	Record of Decision
USFWS	US Fish and Wildlife Service
VELB	Valley Elderberry Longhorn Beetle
WMA	Wildlife Management Area
WQC	Water Quality Certification (Section 401 Clean Water Act)

TABLE 1. CORPS PROJECTS UNDER CONSTRUCTION DURING FY 2018

	State	MSC	PROJECT (OR PROGRAM NAME)
1	AK	POD	AKUTAN HARBOR, AK
2	AK	POD	ALASKA COASTAL EROSION, AK
3	AK	POD	ALASKA ENVIRONMENTAL, AK
4	AK	POD	BETHEL BANK STABILIZATION, AK
5	AK	POD	CHENA RIVER LAKES, AK
6	AK	POD	DILLINGHAM EMERGENCY BANK STABILIZATION, AK
7	AK	POD	FALSE PASS HARBOR, AK
8	AK	POD	NOME HARBOR IMPROVEMENTS, AK
9	AK	POD	PORT LIONS HARBOR, AK
10	AK	POD	SAND POINT HARBOR, AK
11	AK	POD	SEWARD HARBOR, AK
12	AK	POD	SITKA HARBOR, AK
13	AK	POD	ST PAUL HARBOR, AK
14	AK	POD	UNALASKA HARBOR, AK
15	AK	POD	VALDEZ HARBOR EXPANSION, AK
16	AL	SAD	GENEVA LEVEE REHABILITATION, AL
17	AL	SAD	MOBILE HARBOR, AL
18	AL	SAD	TENNESSEE - TOMBIGBEE WATERWAY WILDLIFE MITIGATION, AL & MS
19	AL	SAD	TENNESSEE - TOMBIGBEE WATERWAY, AL & MS
20	AL	SAD	TUSCALOOSA AREA OFFICE, AL
21	AL	SAD	WALTER F GEORGE LOCK & DAM
22	AR	MVD	BAYOU METO BASIN
23	AR	MVD	GRAND PRAIRIE REGION
24	AR	SWD	MONTGOMERY POINT LOCK AND DAM, AR
25	AR	SWD	OZARK - JETA TAYLOR LOCK AND DAM, AR
26	AR	SWD	TABLE ROCK LAKE
27	AZ	SPD	NOGALES WASH, AZ
28	AZ	SPD	RIO DE FLAG FLAGSTAFF, AZ
29	AZ	SPD	RIO SALADO, PHOENIX AND TEMPE REACHES, AZ
30	AZ	SPD	TRES RIOS, AZ
31	AZ	SPD	TUCSON DRAINAGE AREA, AZ
32	CA	SPD	AMERICAN RIVER COMMON FEATURES, NATOMAS BASIN, CA
33	CA	SPD	AMERICAN RIVER WATERSHED (COMMON FEATURES), CA
34	CA	SPD	AMERICAN RIVER WATERSHED (FOLSOM DAM MODIFICATIONS), CA
35	CA	SPD	AMERICAN RIVER WATERSHED (FOLSOM DAM RAISE), CA
36	CA	SPD	CALFED LEVEE STABILITY PROGRAM, CA
37	CA	SPD	CAMBRIA SEAWATER DESALINATION, CA
38	CA	SPD	CITY OF SANTA CLARITA, CA
39	CA	SPD	CONTRA COSTA CANAL, CA (SEC 219)

	State	MSC	PROJECT (OR PROGRAM NAME)
40	CA	SPD	COYOTE & BERRYESSA CREEKS, CA
41	CA	SPD	DESERT HOT SPRINGS, CA
42	CA	SPD	FARMINGTON RECHARGE (SEC 502)
43	CA	SPD	GUADALUPE RIVER, CA
44	CA	SPD	HAMILTON AIRFIELD WETLANDS RESTORATION, CA*
45	CA	SPD	HAMILTON CITY, CA
46	CA	SPD	HARBOR/SOUTH BAY WATER RECYCLING STUDY, LOS ANGELES, CA
47	CA	SPD	ISABELLA LAKE, CA (DAM SAFETY)
48	CA	SPD	KAWEAH RIVER, CA
49	CA	SPD	LLAGAS CREEK, CA
50	CA	SPD	LOS ANGELES COUNTY DRAINAGE AREA, CA
51	CA	SPD	LOS ANGELES HARBOR MAIN CHANNEL DEEPENING, CA
52	CA	SPD	MARTIS CREEK, CA (DAM SAFETY)
53	CA	SPD	MARYSVILLE/YUBA CITY LEVEE RECONSTRUCTION, CA
54	CA	SPD	MERCED COUNTY STREAMS, CA
55	CA	SPD	MID-VALLEY AREA LEVEE RECONSTRUCTION, CA
56	CA	SPD	MORRO BAY HARBOR CA
57	CA	SPD	MURRIETA CREEK, CA
58	CA	SPD	NAPA RIVER, CA
59	CA	SPD	NAPA RIVER, SALT MARSH RESTORATION, CA*
60	CA	SPD	NORCO BLUFFS, SANTA ANA RIVER, CA
61	CA	SPD	NORTH VALLEY REGIONAL WATER INFRASTRUCTURE, CA
62	CA	SPD	OAKLAND HARBOR (42 FOOT), CA
63	CA	SPD	OAKLAND HARBOR (50 FOOT PROJECT), CA
64	CA	SPD	PETALUMA RIVER, CA
65	CA	SPD	PLACER COUNTY SUB-REGIONAL WASTEWATER TREATMENT
66	CA	SPD	PORT HUENEME, CA
67	CA	SPD	PORT OF LONG BEACH (DEEPENING), CA
68	CA	SPD	PORT OF LOS ANGELES WATER QUALITY MODELING STUDY
69	CA	SPD	SACRAMENTO DEEPWATER SHIP CHANNEL, CA
70	CA	SPD	SACRAMENTO RIVER BANK PROTECTION PROJECT, CA
71	CA	SPD	SACRAMENTO RIVER, GLENN-COLUSA IRRIGATION DISTRICT, CA
72	CA	SPD	SAN FRANCISCO BAY TO STOCKTON, CA
73	CA	SPD	SAN FRANCISCO, CA (PIER 36)
74	CA	SPD	SAN LUIS REY RIVER, CA
75	CA	SPD	SAN RAMON VALLEY RECYCLED WATER, CA
76	CA	SPD	SANTA ANA RIVER MAINSTEM, CA
77	CA	SPD	SANTA MARIA LEEVES, CA
78	CA	SPD	SANTA PAULA CREEK, CA
79	CA	SPD	SOUTH PERRIS, CA
80	CA	SPD	SOUTH SACRAMENTO COUNTY STREAMS, CA

	State	MSC	PROJECT (OR PROGRAM NAME)
81	CA	SPD	STOCKTON METROPOLITIAN FLOOD CONTROL REIMBURSEMENT, CA
82	CA	SPD	SUCCESS DAM, TULE RIVER, CA (DAM SAFETY)
83	CA	SPD	SURFSIDE - SUNSET - NEWPORT BEACH, CA
84	CA	SPD	TAHOE BASIN RESTORATION 108*
85	CA	SPD	TULE RIVER, CA
86	CA	SPD	UPPER GUADALUPE RIVER, CA
87	CA	SPD	UPPER NEWPORT BAY, CA
88	CA	SPD	WEST SACRAMENTO, CA
89	CA	SPD	YUBA RIVER BASIN, CA
90	CO	NWD	CHERRY CREEK LAKE, CO
91	CO	SPD	ALAMOSA, CO
92	DC	NAD	WASHINGTON, DC & VICINITY
93	DE	NAD	DELAWARE BAY COASTLINE, BROADKILL BEACH, DE & NJ
94	DE	NAD	DELAWARE BAY COASTLINE, PT. MAHON, DE & NJ
95	DE	NAD	DELAWARE BAY COASTLINE, ROOSEVELT INLET TO LEWES BEACH, DE
96	DE	NAD	DELAWARE BAY COASTLINE, VILLAS, DE & NJ
97	DE	NAD	DELAWARE COAST PROTECTION, DE
98	DE	NAD	DELAWARE COAST, BETHANY BEACH TO SOUTH BETHANY BEACH
99	DE	NAD	DELAWARE COAST, CAPE HENLOPEN TO FENWICK ISLAND, DE
100	DE	NAD	DELAWARE COAST, REHOBOTH BEACH TO DEWEY BEACH, DE
101	FL	SAD	BREVARD COUNTY, CANAVERAL HARBOR, FL
102	FL	SAD	BROWARD COUNTY, FL (REIMBURSABLE)
103	FL	SAD	CEDAR HAMMOCK, WARES CREEK, FL
104	FL	SAD	CENTRAL & SOUTHERN FLORIDA, FL
105	FL	SAD	DADE COUNTY, FL
106	FL	SAD	DUVAL COUNTY, FL
107	FL	SAD	EVERGLADES AND SOUTH FLORIDA ECOSYSTEM RESTORATION, FL*
108	FL	SAD	FLORIDA KEYS WATER QUALITY IMPROVEMENTS, FL
109	FL	SAD	FORT PIERCE BEACH, FL
110	FL	SAD	HERBERT HOOVER DIKE, FL (SEEPAGE CONTROL)
111	FL	SAD	INTRACOASTAL WATERWAY CR TO AR MANATEE CO
112	FL	SAD	JACKSONVILLE HARBOR DEEPENING, FL
113	FL	SAD	JACKSONVILLE HARBOR, FL
114	FL	SAD	KISSIMMEE RIVER, FL
115	FL	SAD	LEE COUNTY, FL
116	FL	SAD	MILE POINT
117	FL	SAD	MANATEE COUNTY, FL
118	FL	SAD	MANATEE HARBOR, FL
119	FL	SAD	MARTIN COUNTY, FL
120	FL	SAD	MIAMI HARBOR CHANNEL FL

	State	MSC	PROJECT (OR PROGRAM NAME)
121	FL	SAD	NASSAU COUNTY, FL
122	FL	SAD	PALM BEACH COUNTY, FL
123	FL	SAD	PANAMA CITY HARBOR, FL
124	FL	SAD	PINELLAS COUNTY, FL
125	FL	SAD	PONCE DE LEON INLET, FL
126	FL	SAD	SARASOTA COUNTY, FL
127	FL	SAD	ST JOHN'S COUNTY, FL
128	FL	SAD	ST LUCIE INLET, FL
129	FL	SAD	TAMPA HARBOR MAIN CHANNEL, FL
130	FL	SAD	TAMPA HARBOR, ALAFIA RIVER, FL
131	FL	SAD	TAMPA HARBOR, BIG BEND, FL
132	FL	SAD	TAMPA HARBOR, FL
133	GA	SAD	ATLANTA ENVIRONMENTAL INFRASTRUCTURE, GA
134	GA	SAD	BRUNSWICK HARBOR, GA
135	GA	SAD	LOWER SAVANNAH RIVER BASIN, GA
136	GA	SAD	RICHARD B RUSSELL DAM AND LAKE, GA & SC
137	GA	SAD	SAVANNAH HARBOR DISPOSAL AREAS, GA & SC
138	GA	SAD	SAVANNAH HARBOR EXPANSION, GA
139	GA	SAD	TYBEE ISLAND, GA
140	HI	POD	HAWAII WATER MANAGEMENT, HI
141	HI	POD	HAWAII WATER SYSTEMS TECHNICAL STUDY, HI
142	HI	POD	IAO STREAM FLOOD CONTROL, MAUI, HI
143	IA	MVD	DES MOINES AND RACCOON RIVERS, IA
144	IA	MVD	DES MOINES RECREATION RIVER AND GREENBELT, IA
145	IA	MVD	LOCK AND DAM 11, MISSISSIPPI RIVER, IA (MAJOR REHAB)
146	IA	MVD	LOCK AND DAM 19, MISSISSIPPI RIVER, IA (MAJOR REHAB)
147	IA	NWD	MISSOURI RIVER FISH AND WILDLIFE RECOVERY, IA, KS, MO, MT, NE, ND & SD*
148	IA	NWD	MISSOURI RIVER LEVEE SYSTEM, IA, NE, KS & MO
149	ID	NWD	RURAL IDAHO, ID
150	IL	LRD	CALUMET HARBOR AND RIVER, IL & IN
151	IL	LRD	CHICAGO SANITARY AND SHIP CANAL DISPERSAL BARRIER, IL
152	IL	LRD	CHICAGO SHORELINE, IL
153	IL	LRD	COOK COUNTY INFRASTRUCTURE, IL
154	IL	LRD	DES PLAINES RIVER, IL
155	IL	LRD	DES PLAINES WETLANDS DEMONSTRATION PROJECT, IL
156	IL	LRD	GREAT LAKES FISHERIES AND ECOSYSTEM RESTORATION, IL, IN, MN, OH & PA*
157	IL	LRD	MCCOOK AND THORNTON RESERVOIRS, IL
158	IL	LRD	OLMSTED LOCKS AND DAM, OHIO RIVER, IL & KY
159	IL	MVD	ALTON TO GALE ORGANIZED LEVEE DISTRICTS, IL & MO
160	IL	MVD	CHAIN OF ROCKS CANAL, MISSISSIPPI RIVER, IL (DEF CORR)
161	IL	MVD	EAST ST LOUIS, IL

	State	MSC	PROJECT (OR PROGRAM NAME)
162	IL	MVD	ILLINOIS RIVER BASIN RESTORATION , IL
163	IL	MVD	ILLINOIS WATERWAY, LOCKPORT LOCK AND DAM, IL (MAJOR REHAB)
164	IL	MVD	LOCK AND DAM 24, MISSISSIPPI RIVER, IL & MO (MAJOR REHAB)
165	IL	MVD	LOCK AND DAM 27, MISSISSIPPI RIVER, IL (MAJOR REHAB)
166	IL	MVD	MADISON AND ST. CLAIR COUNTIES, IL
167	IL	MVD	MELVIN PRICE LOCK AND DAM (2ND LOCK), IL & MO
168	IL	MVD	MELVIN PRICE LOCK AND DAM, IL & MO
169	IL	MVD	UPPER MISSISSIPPI RIVER RESTORATION, IL, IA, MN, MO & WI*
170	IL	MVD	B5 MISSISSIPPI RIVER DMMP POOL 13 SABULA
171	IL	MVD	WOOD RIVER D&LD, GRASSY LAKE PUMP STATION, IL
172	IL	MVD	WOOD RIVER LEVEE, DEFICIENCY CORRECTION AND RECONSTRUCTION, IL
173	IN	LRD	CALUMET REGION, IN
174	IN	LRD	CEDAR LAKE, IN
175	IN	LRD	CITY OF INDIANAPOLIS, IN
176	IN	LRD	INDIANA HARBOR, CONFINED DISPOSAL FACILITY, IN
177	IN	LRD	INDIANA SHORELINE EROSION, IN
178	IN	LRD	INDIANAPOLIS, WHITE RIVER (NORTH), IN
179	IN	LRD	JOHN T MYERS LOCKS AND DAM, IN & KY
180	IN	LRD	LAKE MICHIGAN WATERFRONT, IN
181	IN	LRD	LITTLE CALUMET RIVER BASIN, CADY MARSH DITCH, IN
182	IN	LRD	LITTLE CALUMET RIVER, IN
183	IN	LRD	OHIO RIVER GREENWAY PUBLIC ACCESS, IN
184	KS	NWD	TOPEKA, KS
185	KS	NWD	TURKEY CREEK BASIN, KS & MO
186	KY	LRD	KENTUCKY LOCK AND DAM, TENNESSEE RIVER, KY
187	KY	LRD	KENTUCKY RIVER, LOCK AND DAM 10, KY
188	KY	LRD	MCALPINE LOCKS AND DAM, OHIO RIVER, KY & IN
189	KY	LRD	METROPOLITAN LOUISVILLE, BEARGRASS CREEK, KY
190	KY	LRD	METROPOLITAN LOUISVILLE, POND CREEK, KY
191	KY	LRD	OHIO RIVER SHORELINE, PADUCAH, KY
192	KY	LRD	ROUGH RIVER, KY (MAJOR REHAB)
193	KY	LRD	SOUTHERN AND EASTERN KENTUCKY ENVIRONMENTAL INFRASTRUCTURE, KY
194	KY	LRD	WOLF CREEK DAM, LAKE CUMBERLAND, KY
195	LA	MVD	ASCENSION PARISH ENVIRONMENTAL INFRASTRUCTURE
196	LA	MVD	BARATARIA BASIN LANDBRIDGE, LA
197	LA	MVD	CALCASIEU RIVER AND PASS, LA
198	LA	MVD	COMITE RIVER, LA
199	LA	MVD	EAST BATON ROUGE PARISH ENVIRONMENTAL INFRASTRUCTURE, LA
200	LA	MVD	EAST BATON ROUGE PARISH, LA

	State	MSC	PROJECT (OR PROGRAM NAME)
201	LA	MVD	HURRICANE PROTECTION SYSTEM MANAGEMENT
202	LA	MVD	IBERIA PARISH, LA ENVIRONMENTAL INFRASTRUCTURE
203	LA	MVD	INNER HARBOR NAVIGATION CANAL LOCK, LA
204	LA	MVD	J BENNETT JOHNSTON WATERWAY, LA
205	LA	MVD	LAKE PONTCHARTRAIN AND VICINITY, LA (HURRICANE PROTECTION)
206	LA	MVD	LAROSE TO GOLDEN MEADOW, LA (HURRICANE PROTECTION)
207	LA	MVD	LIVINGSTON PARISH ENVIRONMENTAL INFRASTRUCTURE
208	LA	MVD	LOUISIANA COASTAL AREA ECOSYSTEM RESTORATION, LA*
209	LA	MVD	MISSISSIPPI DELTA REGION, LA
210	LA	MVD	NEW ORLEANS TO VENICE, LA (HURRICANE PROTECTION)
211	LA	MVD	RED RIVER BELOW DENISON DAM, LA, AR & TX
212	LA	MVD	SOUTHEAST LOUISIANA, LA
213	LA	MVD	WEST BANK AND VICINITY, WEST CLOSURE
214	LA	MVD	WEST BANK AND VICINITY, NEW ORLEANS, LA
215	MA	NAD	BOSTON HARBOR DEEP DRAFT INVESTIGATION, MA
216	MA	NAD	MUDDY RIVER, MA
217	MD	NAD	ANACOSTIA RIVER AND TRIBUTARIES, MD & DC
218	MD	NAD	ASSATEAGUE, MD*
219	MD	NAD	ATLANTIC COAST OF MARYLAND, MD
220	MD	NAD	BALTIMORE HARBOR AND CHANNELS (50 FOOT), MD
221	MD	NAD	BALTIMORE HARBOR, MD
222	MD	NAD	BALTIMORE METRO - GWYNNNS FALLS, MD
223	MD	NAD	CHESAPEAKE BAY ENV RESTORATION AND PROTECTION, MD, VA & PA
224	MD	NAD	CHESAPEAKE BAY OYSTER RECOVERY, MD & VA*
225	MD	NAD	CUMBERLAND, MD AND RIDGELEY, WV
226	MD	NAD	POPLAR ISLAND, MD*
227	MD	NAD	SMITH ISLAND ENVIRONMENTAL RESTORATION, MD
228	MI	LRD	GENESEE COUNTY, MI
229	MI	LRD	OAKLAND COUNTY, MI
230	MI	LRD	SAULT STE MARIE (REPLACEMENT LOCK), MI
231	MN	MVD	BRECKENRIDGE, MN
232	MN	MVD	LOCK AND DAM 3, MISSISSIPPI RIVER, MN (MAJOR REHAB)
233	MN	MVD	LOWER ST ANTHONY FALLS RAPIDS RESTORATION, MN
234	MN	MVD	MARSH LAKE, MN (MINNESOTA RIVER AUTHORITY)
235	MN	MVD	NORTHEASTERN MINNESOTA ENVIRONMENTAL INFRASTRUCTURE, MN
236	MN	MVD	ROSEAU, MN
237	MO	MVD	BOIS BRULE DRAINAGE AND LEVEE DISTRICT, MISSOURI
238	MO	MVD	CAPE GIRARDEAU (FLOODWALL), MO
239	MO	MVD	LOCK & DAM 25 DAM SAFETY STUDY, MO
240	MO	MVD	MERAMEC RIVER BASIN, VALLEY PARK LEVEE, MO

	State	MSC	PROJECT (OR PROGRAM NAME)
241	MO	MVD	MISSISSIPPI RIVER BETWEEN THE OHIO AND MISSOURI RIVERS (REG WORKS), MO
242	MO	MVD	MONARCH - CHESTERFIELD, MO
243	MO	MVD	ST LOUIS FLOOD PROTECTION, MO
244	MO	MVD	ST. LOUIS, MO (COMBINED SEWER OVERFLOW)
245	MO	MVD	STE GENEVIEVE, MO
246	MO	NWD	BLUE RIVER BASIN, KANSAS CITY, MO
247	MO	NWD	BLUE RIVER CHANNEL, KANSAS CITY, MO
248	MO	NWD	KANSAS CITYS, MO & KS
249	MO	NWD	MISSOURI & MIDDLE MISSISSIPPI RIVERS ENHANCEMENT, MO
250	MO	NWD	MISSOURI RIVER LEVEE SYSTEM, UNITS L455 & R460-471, MO & KS
251	MO	NWD	SWOPE PARK INDUSTRIAL AREA, KANSAS CITY, MO
252	MS	MVD	DESOTO COUNTY WASTEWATER TREATMENT, MS
253	MS	MVD	MISSISSIPPI ENVIRONMENTAL INFRASTRUCTURE, MS
254	MS	SAD	JACKSON COUNTY INDUSTRIAL WATER SUPPLY, MS
255	MS	SAD	PASCAGOULA HARBOR MS
256	MT	NWD	FORT PECK DAM & LAKE MT
257	MT	NWD	RURAL MONTANA, MT
258	NC	SAD	BRUNSWICK COUNTY BEACHES, NC
259	NC	SAD	CAROLINA BEACH AND VICINITY, NC
260	NC	SAD	DARE COUNTY BEACHES, NC
261	NC	SAD	MANTEO (SHALLOWBAG) BAY, NC
262	NC	SAD	STANLY COUNTY WASTEWATER INFRASTRUCTURE, NC
263	NC	SAD	WEST ONSLOW BEACH AND NEW RIVER INLET, NC
264	NC	SAD	WILMINGTON HARBOR, NC
265	NC	SAD	WRIGHTSVILLE BEACH, NC
266	ND	MVD	FARGO, ND - MOORHEAD, MN METRO
267	ND	MVD	GRAFTON, PARK RIVER, ND
268	ND	MVD	NORTH DAKOTA INFRASTRUCTURE, ND
269	ND	MVD	SHEYENNE RIVER, ND
270	ND	NWD	GARRISON DAM, LAKE SAKAKAWEA, ND
271	NE	NWD	SAND CREEK WATERSHED, SAUNDERS COUNTY, NEBRASKA
272	NE	NWD	WESTERN SARPY COUNTY AND CLEAR CREEK
273	NH	NAD	EDWARD MACDOWELL LAKE, NH
274	NJ	NAD	BARNEGAT INLET TO LITTLE EGG HARBOR INLET, NJ
275	NJ	NAD	BRIGANTINE INLET TO GREAT EGG INLET (ABSECON ISLAND), NJ
276	NJ	NAD	BRIGANTINE INLET TO GREAT EGG INLET, BRIGANTINE ISLAND, NJ
277	NJ	NAD	CAPE MAY INLET TO LOWER TOWNSHIP, NJ
278	NJ	NAD	DEL RIV VIC OF CAMDEN BECKETT ST
279	NJ	NAD	DELAWARE BAY COASTLINE, DE & NJ - OAKWOOD BEACH, NJ
280	NJ	NAD	DELAWARE BAY COASTLINE, DE & NJ REEDS BEACH TO PIERCES POINT
281	NJ	NAD	DELAWARE RIVER MAIN CHANNEL, NJ, PA & DE

	State	MSC	PROJECT (OR PROGRAM NAME)
282	NJ	NAD	GREAT EGG HARBOR INLET AND PECK BEACH, NJ
283	NJ	NAD	GREAT EGG HARBOR INLET TO TOWNSEND INLET, NJ
284	NJ	NAD	HACKENSACK MEADOWLANDS,NJ
285	NJ	NAD	JOSEPH G MINISH HISTORIC WATERFRONT PARK,NJ
286	NJ	NAD	KILL VAN KULL, NY
287	NJ	NAD	LOWER CAPE MAY MEADOWS, CAPE MAY POINT, NJ*
288	NJ	NAD	MANASQUAN INLET TO BARNEGAT INLET, NJ
289	NJ	NAD	MOLLY ANN'S BROOK AT HALEDON, PROSPECT PARK AND PATERSON, NJ
290	NJ	NAD	NEW JERSEY SHORE PROTECTION, HEREFORD TO CAPE MAY INLET, NJ
291	NJ	NAD	PASSAIC RIVER BASIN FLOOD MANAGEMENT, NJ
292	NJ	NAD	PASSAIC RIVER MAINSTEM, NJ
293	NJ	NAD	PASSAIC RIVER PRESERVATION OF NATURAL STORAGE AREAS, NJ
294	NJ	NAD	RAMAPO AND MAHWAH RIVERS, MAHWAH, NJ AND SUFFERN, NY
295	NJ	NAD	RAMAPO RIVER AT OAKLAND, NJ
296	NJ	NAD	RARITAN BAY AND SANDY HOOK BAY, NJ
297	NJ	NAD	RARITAN BAY AND SANDY HOOK BAY, PORT MONMOUTH, NJ
298	NJ	NAD	RARITAN BAY AND SANDY HOOK BAY, UNION BEACH, NJ
299	NJ	NAD	RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NJ
300	NJ	NAD	SANDY HOOK TO BARNEGAT INLET, NJ
301	NJ	NAD	SOUTH RIVER, RARITAN RIVER BASIN, NJ
302	NJ	NAD	TOWNSENDS INLET TO CAPE MAY INLET, NJ
303	NM	SPD	ACEQUIAS IRRIGATION SYSTEM, NM
304	NM	SPD	ALAMOGORDO, NM
305	NM	SPD	CENTRAL NEW MEXICO, NM
306	NM	SPD	CENTRAL NEW MEXICO, NM
307	NM	SPD	MIDDLE RIO GRANDE RESTORATION, NM*
308	NM	SPD	NEW MEXICO ENVIRONMENTAL INFRASTRUCTURE PROGRAM
309	NM	SPD	RIO GRANDE FLOODWAY, SAN ACACIA TO BOSQUE DEL APACHE, NM
310	NM	SPD	SOUTHWEST VALLEY FLOOD DAMAGE REDUCTION, ALBUQUERQUE, NM
311	NV	SPD	RURAL NEVADA (SECTION 595)
312	NV	SPD	TROPICANA AND FLAMINGO WASHES, NV
313	NY	NAD	ARTHUR KILL CHANNEL HOWLAND HK MARINE TERMINAL NY & NJ
314	NY	NAD	ATLANTIC COAST OF NYC, ROCKAWAY INLET TO NORTON POINT, NY
315	NY	NAD	EAST ROCKAWAY INLET TO ROCKAWAY INLET AND JAMAICA BAY, NY
316	NY	NAD	FIRE ISLAND INLET TO JONES INLET, NY
317	NY	NAD	FIRE ISLAND INLET TO MONTAUK POINT, NY
318	NY	NAD	HEAMPSTEAD HARBOR, NY
319	NY	NAD	LONG BEACH ISLAND, NY
320	NY	NAD	MONTAUK POINT, NY

	State	MSC	PROJECT (OR PROGRAM NAME)
321	NY	NAD	NEW YORK AND NEW JERSEY HARBOR, NY & NJ
322	NY	NAD	NEW YORK CITY WATERSHED, NY
323	NY	NAD	NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT, NY & NJ
324	NY	NAD	SOUTH SHORE OF STATEN ISLAND, NY
325	OH	LRD	BOLIVAR DAM, OH (DAM SAFETY)
326	OH	LRD	DOVER DAM, MUSKINGUM RIVER, OH (DAM SAFETY)
327	OH	LRD	MILL CREEK, OH
328	OH	LRD	MOHAWK DAM SEEPAGE CORRECTION MAJOR REHAB, OH
329	OH	LRD	OHIO & NORTH DAKOTA ENVIRONMENTAL INFRASTRUCTURE, OH & ND (SECTION
330	OH	LRD	OHIO RIVERFRONT, CINCINNATI, OH
331	OH	LRD	ZOAR LEVEE AT DOVER DAM, OH (SEEPAGE CORRECTION - REHABILITATION)
332	OK	SWD	CANTON LAKE, OK
333	OK	SWD	FRY CREEKS, BIXBY, OK
334	OK	SWD	MINGO CREEK, TULSA, OK
335	OK	SWD	PINE CREEK LAKE, OK
336	OK	SWD	ROBERT S. KERR LOCK AND DAM AND RESERVOIR, OK
337	OK	SWD	YUKON, OKLAHOMA
338	OR	NWD	COLUMBIA RIVER AT THE MOUTH, OR & WA
339	OR	NWD	COLUMBIA RIVER CHANNEL IMPROVEMENTS, OR & WA
340	OR	NWD	COLUMBIA RIVER TREATY FISHING ACCESS SITES, OR & WA
341	OR	NWD	ELK CREEK LAKE, OR
342	OR	NWD	LOWER COLUMBIA RIVER ECOSYSTEM RESTORATION, OR & WA*
343	OR	NWD	WILLAMETTE RIVER TEMPERATURE CONTROL, OR*
344	PA	LRD	EAST BRANCH CLARION RIVER LAKE, PA
345	PA	LRD	EMSWORTH LOCKS AND DAM, OHIO RIVER, PA
346	PA	LRD	LOCKS AND DAMS 2, 3 AND 4, MONONGAHELA RIVER, PA
347	PA	LRD	PRESQUE ISLE PENINSULA, PA (PERMANENT)
348	PA	LRD	SAW MILL RUN, PITTSBURGH, PA
349	PA	LRD	SOUTH CENTRAL PA ENVIRONMENTAL IMPROVEMENT PROGRAM, PA
350	PA	LRD	THREE RIVERS WET WEATHER DEMO PROGRAM, PA
351	PA	LRD	WEST VIRGINIA AND PENNSYLVANIA FLOOD CONTROL, PA & WV
352	PA	NAD	BROAD TOP REGION, PA
353	PA	NAD	GLEN FOERD, PA
354	PA	NAD	LACKAWANNA RIVER - GREENRIDGE
355	PA	NAD	LACKAWANNA RIVER, OLYPHANT, PA
356	PA	NAD	LACKAWANNA RIVER, SCRANTON, PA
357	PA	NAD	NORTHEAST COUNTIES ENVIRONMENTAL INFRASTRUCTURE
358	PA	NAD	SOUTHEASTERN PENNSYLVANIA, PA
359	PA	NAD	WILLIAMSPORT, PA
360	PA	NAD	WYOMING VALLEY, PA (LEVEE RAISING)

	State	MSC	PROJECT (OR PROGRAM NAME)
361	PR	SAD	ARECIBO RIVER, PR
362	PR	SAD	PORTUGUES AND BUCANA RIVERS, PR
363	PR	SAD	RIO DE LA PLATA, PR
364	PR	SAD	RIO GRANDE DE MANATI, PR
365	PR	SAD	RIO PUERTO NUEVO, PR
366	PR	SAD	SAN JUAN HARBOR, PR
367	SC	SAD	CHARLESTON HARBOR, SC
368	SC	SAD	FOLLY BEACH, SC
369	SC	SAD	LAKES MARION AND MOULTRIE, SC
370	SC	SAD	MYRTLE BEACH, SC
371	TN	LRD	CENTER HILL LAKE, TN
372	TN	LRD	CHICKAMAUGA LOCK, TENNESSEE RIVER, TN
373	TN	LRD	CUMBERLAND COUNTY WATER SUPPLY, TN
374	TN	MVD	WEST TENNESSEE TRIBUTARIES
375	TX	SPD	EL PASO COUNTY, TX
376	TX	SPD	EL PASO, TX
377	TX	SWD	BRAYS BAYOU, HOUSTON, TX
378	TX	SWD	BUFFALO BAYOU AND TRIBUTARIES, TX
379	TX	SWD	CEDAR BAYOU, TX
380	TX	SWD	CENTRAL CITY, FORT WORTH, UPPER TRINITY RIVER BASIN, TX
381	TX	SWD	CHANNEL TO VICTORIA, TX
382	TX	SWD	CLEAR CREEK, TX
383	TX	SWD	CORPUS CHRISTI SHIP CHANNEL, TX
384	TX	SWD	DALLAS FLOODWAY EXTENSION, TRINITY RIVER PROJECT, TX
385	TX	SWD	FREEPORT HBR (45 FT PROJECT), TX
386	TX	SWD	GIWW, CHOCOLATE BAYOU, TX
387	TX	SWD	GRAHAM, TX (BRAZOS RIVER BASIN)
388	TX	SWD	GREENS BAYOU, HOUSTON, TX
389	TX	SWD	HOUSTON - GALVESTON NAVIGATION CHANNELS, TX
390	TX	SWD	JOHNSON CREEK UPPER TRINITY BASIN, ARLINGTON, TX
391	TX	SWD	LEWISVILLE DAM, TX
392	TX	SWD	LOWER COLORADO RIVER BASIN (WHARTON/ONION), TX
393	TX	SWD	RED RIV BAS CHLOR AREA XIII/XIV, TX
394	TX	SWD	SABINE - NECHES WATERWAY, TX
395	TX	SWD	SAN ANTONIO CHANNEL IMPROVEMENT PROJECT
396	TX	SWD	SIMS BAYOU, HOUSTON, TX
397	TX	SWD	TEXAS CITY CHANNEL (50-FOOT PROJECT), TX
398	TX	SWD	WACO LAKE
399	TX	SWD	WHITNEY LAKE, TX
400	UT	SPD	RURAL UTAH, UT
401	VA	LRD	EASTERN SHORE AND SOUTHWEST VIRGINIA, VA

	State	MSC	PROJECT (OR PROGRAM NAME)
402	VA	LRD	LEVISA AND TUG FORKS AND UPPER CUMBERLAND RIVER, VA, WV & KY
403	VA	NAD	AIWW, BRIDGES AT DEEP CREEK, VA
404	VA	NAD	CRANEY ISLAND EXPANSION
405	VA	NAD	JAMES RIVER CHANNEL, VA
406	VA	NAD	LAKE MERRIWEATHER, GOSHEN DAM AND SPILLWAY, VA
407	VA	NAD	NORFOLK HARBOR AND CHANNELS, CRANEY ISLAND, VA
408	VA	NAD	NORFOLK HARBOR AND CHANNELS, VA (DEEPENING)
409	VA	NAD	SANDBRIDGE BEACH, VA
410	VA	NAD	VIRGINIA BEACH, VA (HURRICANE PROTECTION)
411	VA	NAD	WILLOUGHBY SPIT AND VICINITY, NORFOLK, VA
412	VA	SAD	ROANOKE RIVER UPPER BASIN, HEADWATERS AREA, VA
413	VT	NAD	BALL MOUNTAIN, VT
414	VT	NAD	BURLINGTON HARBOR BREAKWATER, VT
415	VT	NAD	LAKE CHAMPLAIN WATERSHED INITIATE,VT
416	WA	NWD	COLUMBIA RIVER FISH MITIGATION, WA, OR & ID*
417	WA	NWD	DUWAMISH AND GREEN RIVER BASIN, WA*
418	WA	NWD	GRAYS HARBOR, WA
419	WA	NWD	HOWARD HANSON DAM, WA
420	WA	NWD	LOWER SNAKE RIVER FISH AND WILDLIFE COMPENSATION, WA, OR & ID
421	WA	NWD	MILL CREEK LAKE, WA
422	WA	NWD	MOUNT SAINT HELENS SEDIMENT CONTROL, WA
423	WA	NWD	MUD MOUNTAIN DAM, WA
424	WA	NWD	PUGET SOUND AND ADJACENT WATERS RESTORATION, WA*
425	WA	NWD	SHOALWATER BAY, WA
426	WA	NWD	SKOKOMISH RIVER, WA
427	WA	NWD	THE DALLES LOCK AND DAM, WA & OR
428	WI	LRD	GREEN BAY HARBOR, WI
429	WI	LRD	NORTHERN WISCONSIN ENVIRONMENTAL ASSISTANCE, WI
430	WI	MVD	B5 MISSISSIPPI DREDGED MATERIAL MNGT HURRICANE ISL, POOL 11
431	WI	MVD	ST. CROIX FALLS SEWAGE TREATMENT PLANT, WI
432	WV	LRD	BLUESTONE LAKE, WV
433	WV	LRD	CENTRAL WEST VIRGINIA ENVIRONMENTAL INFRASTRUCTURE, WV (SECTION 571)
434	WV	LRD	GREENBRIER RIVER BASIN, WV
435	WV	LRD	ISLAND CREEK BASIN IN AND AROUND LOGAN, WEST VIRGINIA
436	WV	LRD	LOWER MUD RIVER, MILTON, WV
437	WV	LRD	MARMET LOCK, KANAWHA RIVER, WV
438	WV	LRD	ROBERT C BYRD LOCKS AND DAM, OHIO RIVER, WV & OH
439	WV	LRD	SOUTHERN WEST VIRGINIA ENVIRONMENTAL INFRASTRUCTURE, WV (SECTION
440	WV	NAD	MOOREFIELD, WV

	State	MSC	PROJECT (OR PROGRAM NAME)
441	WY	NWD	JACKSON HOLE RESTORATION, WY

*Indicates an ecosystem restoration project and do not require compensatory mitigation.

TABLE 2. Status of Corps projects with on-going mitigation requirements in FY2018

	Division	District	Project Name	Percent Mitigation Physically Complete	Percent Project Physically Complete	Mitigation Total Acres of Land Required	Mitigation Total Acres of Land Acquired	Mitigation Requirements	Mitigation Accomplishments to Date	Estimated Date of Success
1	LRD	L2RC	Little Calumet River, IN	65	100	400	435.1	A total of 400 ac are required to meet the compensatory mitigation requirement for the Little Calumet River project. Mitigation includes establishing functional BLH forests and emergent wetlands offsite.	<p>To date, all of the required land has been acquired. 435 ac were acquired to ensure that the 400 ac mitigation requirement was met. In the event that portions of the site do not reach their target wetland status, there's an approximately 10% buffer built in to ensure that the 400 ac requirement is met. Little Calumet mitigation area restored: 3 ac of wet prairie, 42 ac of mesic/wet mesic prairie and 44 ac of wet oak savanna. Hobart Marsh: No monitoring or mitigation work was done during 2011 or 2012, and no work of any kind was done on this project from 2013-2015. The project was suspended pending resolution of financial issues of the sponsor. These issues were resolved and a mitigation contract was awarded in Sep 2016.</p> <p>The contract awarded in 2016 at the Hobart Marsh project area included extensive mitigation work including invasive species control, hydrological modification, erosion control, and tree removal. The 2017 contract at the Little Calumet project area included woody and herbaceous invasive species control, tree planting, and native planting. Updated completion to 65%. Construction should be completed by 2023 and 2024. Monitoring will continue for at least a decade afterward.</p>	2033
2	LRD	LRH	Marmet Lock Replacement, WV (Kanawha River Navigation Study - Marmet Lock Replacement)	100	100	104.8	104.8	A total of 59.45 ac were required for mitigation of impacts to terrestrial natural resources. Terrestrial mitigation activities included restoration of hardwood forest, BLH/riparian habitats, and agricultural/old field. A total of 45.3 ac were required for mitigating impacts to the Kanawha River aquatic habitat. Instream mitigation activities for adverse impacts included construction of instream stone and timber dikes, rubble placement, and root wads for habitat improvement.	<p>In-stream aquatic habitat mitigation activities included fish re-introduction, habitat conservation, and the construction of structural measures; stone and timber dikes, rubble placement, and root wads for habitat improvement. Aquatic mitigation was completed in 2007. Planted 31.1 ac of hardwood forest, 4.1 ac of BLH forest/riparian, and 17.7 ac of prairie grasses. Construction for terrestrial impacts was completed in 2009. Monitoring revealed terrestrial mitigation credits were not sufficient. All other mitigation commitments, except for terrestrial mitigation, have been achieved. No funding for monitoring was received until 2016. Completion is dependent upon funding. If fully funded, terrestrial work and monitoring to be completed by 2024.</p>	2024

	Division	District	Project Name	Percent Mitigation Physically Complete	Percent Project Physically Complete	Mitigation Total Acres of Land Required	Mitigation Total Acres of Land Acquired	Mitigation Requirements	Mitigation Accomplishments to Date	Estimated Date of Success
3	LRD	LRL	Indianapolis, White River (North), IN	87.9	62	74.5	65.5	The project, as approved in the 1997 ROD, required 29 ac of mitigation for impacts to fish and wildlife habitat. Due to current, more stringent levee certification standards, additional clearing is now required and represents a greater impact to habitat. As a result, ~75 ac of mitigation will be necessary to complete the project by implementing the proposed alternative. All mitigation for construction completed to date has been implemented and will be evaluated for success throughout the next 3 years. The remaining and final phase of construction will require ~9 ac of mitigation.	A contract was awarded in FY2014 to implement the mitigation measures on 20 ac within Eagle Creek Park. A separate contract was awarded in FY2015 to implement 45.5 ac of mitigation. This mitigation was implemented in spring 2016, which fulfilled all current mitigation requirements for permits issued by Indiana DNR. A contract for construction of Phase 3B-3 was awarded in FY2017, and included the implementation of the final 9 ac of mitigation at a site to be implemented in Spring 2019. While these 9 ac were not required by the DNR, they are being implemented based on recommendations by the USFWS to mitigate environmental impacts from clearing, and will satisfy the total mitigation target of 74.5 ac.	2022
4	LRD	LRL	Olmsted Locks and Dam, Ohio River, IL and KY	100	84	3463	3463	Mitigation for the project includes the purchase of mitigation lands, increased water management capability on Ballard WMA, KY, monitoring of bald eagles and waterfowl populations, monitoring of freshwater mussel populations, support of development of restoration and propagation methodologies for mussels, and restoration of former clay mine site that serves as large part of construction site.	Acquired BLH, wetlands, and agricultural lands totaling 2,063 ac for wildlife management, constructed water supply system providing wetland management capabilities on Ballard WMA - State Lands, KY, and provided Kentucky DFWR funding to monitor and construct or repair managed wetlands. LRL continues monitoring mussels in 14 m of Ohio River. Annual monitoring began in 1993 and will entail performing 5 sampling events in alternate years after construction is completed. The 1 st sampling event will be completed in 2019, and the last in 2027. Due to sustained elevated river levels during the normal sampling timeframe, sampling could not be conducted in 2018. Other sampling events were conducted from 2014 to 2017 and data related to those efforts are currently being compiled and analyzed by ERDC with a completion report forthcoming.	2027

	Division	District	Project Name	Percent Mitigation Physically Complete	Percent Project Physically Complete	Mitigation Total Acres of Land Required	Mitigation Total Acres of Land Acquired	Mitigation Requirements	Mitigation Accomplishments to Date	Estimated Date of Success
5	LRD	LRN	Center Hill Dam Safety Major Rehab, KY	0	83	15	15	Mitigation requirements for Center Hill Major Rehab Seepage included mitigating for a 0.13 ac wetland at a 2:1 ratio on Nov 2015 by purchasing 0.26 credit from the Tennessee Wildlife Federation Wetland In-Lieu Fee Program. Originally, 450 lf of stream impacts to Moss Hollow Branch, but stream and riparian habitat avoided. No monitoring required. Originally 43 ac of trees removal; however design changes avoided 28 ac of tree removal. Temporary impacts to the remaining 15 ac would be offset by planting of saplings and warm-season grasses after construction.	In FY 2016, the Corps purchased 0.26-ac of in lieu fee credits from wetland bank to mitigate 0.13 ac of impacted wetland habitat from the Tennessee Wildlife Federation Wetland In-Lieu Fee Program. 450 lf of Moss Hollow Branch (stream) and riparian forest avoided and no mitigation required. Reforestation of the 15 ac of impacted upland forest will be conducted in 2019 with project monitoring in Spring of 2020 and 2021.	2021
6	LRD	LRP	Lower Monongahela River, Locks and Dams 2, 3 and 4, PA	0	23.3	396	0	Construction of design features into the Braddock Dam to increase water aeration and increase dissolved oxygen concentration in receiving water. A total of 396 ac are required to meet the compensatory mitigation requirement for the dams 2, 3, and 4 project on the Lower Monongahela River. Of the total acreage, 213 ac are riverine/shoreline accessible through navigation servitude. The other 183 ac of upland were an abandoned strip mine acquired for project disposal requirements and not for project mitigation needs. Mitigation includes restoring shallow riverine habitat, establishing emergent wetlands, and ecosystem restoration of the upland disposal site at project completion.	Low flow re-aeration (water quality gate) completed and operational at Braddock Dam since 2004. Mitigation and monitoring for aquatic habitat (40 ac of dam tailwater loss) and wetland impacts from pool elevation changes (173 ac) is scheduled to commence with the removal of Dam 3 anticipated about 2023, and would likely be completed by 2033. The Monitoring and Adaptive Management Plan associated with this project has not been developed and would likely require consultation with PA DEP, USFWS, and EPA. No upland mitigation work will be initiated at the project's government disposal site (183 ac) until the conclusion of project construction.	2033
7	MVD	MVK	B4-YB, Upper Yazoo Projects, MS **, **	63.4	70	16250	12402.9	Purchase 16,250 ac of BLH habitat, either cleared or agriculture land, for reforestation and management.	12,402 ac of cleared frequently flooded agricultural lands has been purchased and 10,327.94 ac has been reforested with BLH to date. 1,503 ac is in moist soil management and 272 ac were reforested in 2013. 3,847 ac remain to be acquired.	2025

	Division	District	Project Name	Percent Mitigation Physically Complete	Percent Project Physically Complete	Mitigation Total Acres of Land Required	Mitigation Total Acres of Land Acquired	Mitigation Requirements	Mitigation Accomplishments to Date	Estimated Date of Success
8	MVD	MVK	J Bennett Johnston Waterway, LA *	69.1	89	14000	10846	Purchase 14,000 ac of BLH lands for management and reforestation. Lands may be a mixture of agricultural for restoration or be already existing forest.	10,846 ac have been purchased to date, effort is ongoing to acquire land from willing sellers. 3,154 ac remaining.	2025
9	MVD	MVK	Mississippi River Levees-Construction, MS **	98	41.2	5200	5095	Project was required to reforest 5,200 ac of frequently flooded agricultural lands for mitigation purposes. These areas would be acquired in fee and planted in BLH typical of the project area. For the 3 districts combined work in this project, these mitigation features would mitigate 100% of the wetland losses, 252% of the terrestrial losses, and 412% of the waterfowl losses. All attempts would be made to purchase lands in the approximate vicinity of the project impacts and within the state and/or levee district in which the losses occur.	Reforested approximately 5,095 ac of BLH of the required 5,200 ac. Remaining ac of mitigation will continue to be purchased concurrently with future construction efforts. To date, mitigation is ahead of construction.	2030
10	MVD	MVK	Yazoo Basin, Yazoo Backwater Maintenance, MS *,**	54	100	16193	11969	It was determined that 12,500 ac of frequently flooded agricultural lands were to be purchased in fee from willing sellers and reforested to create BLH. The requirement was reanalyzed to account for the time the backwater levee was completed and mitigation construction was started (13 years). This resulted in an additional requirement of 3,693 ac.	8,807 ac at the Lake George tract were planted between 1988 - 1997. Seedling survival exceeds 50% for the BLH species replanted. Funding being used to purchase and plant mitigation properties.	2035

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11	MVD	MVM	Bayou Meto Basin, AR	1.2	14	4140	100	To date, approximately 65 ac of BLH have been impacted (cleared) for construction. ~27 ac of backwater habitat were also impacted due to the construction of the inlet channel and flow regulating reservoir. ~100 ac of BLH restoration is being restored to mitigate impacts to BLH to date, and 27 ac of impacts to backwater habitat would be completed with 1:1 in-kind mitigation. Mitigation requirements stem from NEPA, WQC, and interagency coordination.	A 100-ac tract of prior converted farmland was planted with BLH tree species in 2014. Informal monitoring concluded that tree survival is >90%. A backwater restoration site has not yet been identified.	2021
12	MVD	MVM	Grand Prairie Region, AR	15.9	27	380	142.5	Project is required to restore a total of 380 ac of farmland for the purpose of compensatory mitigation. Wetland impacts will require restoration of 182 ac of BLH forest. Upland impacts will require 198 ac of upland habitat restoration. To date, approximately 50 ac of upland hardwoods were impacted during construction, and require mitigation. Coordination with the interagency team has revealed the preference for native prairie grass restoration at the site that has been acquired. In addition, approximately 40 ac of farmed wetlands were impacted and are being mitigated. Mitigation requirements stem from NEPA, WQC, and interagency coordination.	To date, 106 ac of farmland for wetland mitigation has been purchased with 40 ac of BLH species planted in 2014. In addition, 36.5 ac of upland farmland was purchased, of which 20 ac were planted with Arkansas native prairie grass in 2014 and replanted in 2018 as determine appropriate by the interagency team. Additional prairie restoration work was conducted during 2018 and will continue in 2019.	2022

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13	MVD	MVM	Mississippi River Levees (MRL),B1, AR, IL, KY, LA, MS, MO and TN *,**	20.8	99	1343	558	The MVM portion of the originally authorized MRL project mitigation required the acquisition of a total of 639 ac of farmland, restoration of hydrology, and planting of BLH forest. This requirement has increased to a total of 1,343 ac for impacts that were not anticipated in the 1998 Supplemental EIS. This compensatory mitigation is required for NEPA, WQC, and replacement of habitat values. While it is stated that 99% of project construction is complete, it is not the case that 99% of project impacts have been incurred. MVM is determining the current extent of project impacts, and the amount of mitigation required to be concurrent.	Purchased 2 tracts totaling approximately 200 ac in MO in 2018. MVM portion of MRL compensatory mitigation is approximately 41% complete as approximately 558 ac of the required 1,343 ac have been purchased and are in varying phases of restoration.	2025
14	MVD	MVM	St Francis Basin, AR and MO *	96.9	89	13500	13311	In the 1976 EIS it was determined that the acquisition of 13,500 ac of BLH forest habitat, as well as the completion of various environmental waterway features would fully mitigate project impacts.	Of the required 13,500 ac of BLH, 12,648 ac have been purchased in AR and 663 ac have been purchased in MO. The majority of the acreage was purchased as forested BLH around 1990. ~100 ac are not forested and have not been planted. Current funding received will be used to create a mitigation plan and search for/acquire a portion of the remaining land.	2030
15	MVD	MVM	West Tennessee Tribs, TN	100	42	32000	13568	Required 32,000 ac of compensatory mitigation for a flood control project along the Obion and Forked Deer Rivers and tributaries in TN. Only 13,567 ac of mitigation required for portion of project actually constructed. Mitigation involved purchasing of lands to be owned by the TN Wildlife Resources Agency.	The unconstructed portion of the project was deauthorized in WRDA 2018. Mitigation for the constructed portion is complete, and has been turned over to the State. ~42% of the project was constructed prior to project shut down for reevaluation; and 42.4% of the required lands for mitigation was acquired. The unconstructed portion of this project has been deauthorized and no further mitigation is needed. 13,567 ac were purchased and turned over to the TN Wildlife Resources Agency. Mitigation requirements are determined to be complete and successful.	2018(a)

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16	MVD	MVN	LP 30000-Jefferson, LA (Lake Pontchartrain & Vicinity Hurricane Protection Project)	100	100	725	725	Repair and rehabilitate the required compensatory mitigation by protecting and restoring a 5 mile reach of the Lake Pontchartrain shoreline and building marsh. The original mitigation project was constructed in 1995. The project has not performed as anticipated and the environmental benefits required to compensate for project impacts were not achieved. Construction of project modifications began in January of 2013. Insufficient material was available in 2013 and in 2015 another phase began to place more material. Construction complete June 2016.	This is in support of the existing hurricane levees and mitigation. Construction of initial segmented breakwaters was previously completed. Modifications to these breakwaters has been initiated pursuant to mitigation design modifications authorized in 2011. Additional fill was placed and construction completed in June 2016. Elevation requirements have been met. Qualitative monitoring was complete in spring 2018 which showed the site is self vegetating. Initial success monitoring is scheduled for spring 2020.	2021
17	MVD	MVN	Comite River Basin, LA	100	20	596	596	As of the EA in 2012, project related impacts to 890 ac of BLH will remove 704.6 AAHUs. The mitigation goal is to acquire, reforest and manage cleared agriculture and other suitable land for BLH restoration and preservation to account for 704.6 AAHU's, or acquire mitigation bank credits. A supplemental EA is being completed to determine if there are any remaining mitigation needs.	Monitoring efforts continued on the Comite Floodplain tract in 2017, Currently all 39 ac planted are meeting success criteria on that tract. In 2015, 218.47 mitigation credits were purchased from 3 mitigation banks for a total of \$8.3M dollars. Assuming success at the Floodplain tract in 2019, the project is 66 AAHUs ahead in required mitigation credits, but currently short 453 AAHUs for the total project. Upon success of the Floodplain tract in 2019, 251.62 of the required 704.6 credits will have been achieved. Supplemental EA is being completed to evaluate remaining mitigation needs. Control over invasive species tallow has also been successful.	2024
18	MVD	MVN	Lake Pontchartrain and Vicinity (LPV), Inner Harbor Nav Channel, Lake Borgne, LA	54.4	90	940	940	The programmatic IER was finalized in 2013 and only proposed moving forward with certain features of the plan, the purchase of mitigation bank credits, but required additional NEPA documentation to implement the Corps constructed projects once advanced design was achieved. MVN approved the project decision document in 2014. Mitigation bank credit purchase for E2F01 and E2F02 impacts was completed in 2014. A tiered IER, supplemental IER, and supplemental EA were completed for the Corps constructed projects in the mitigation plan.	Mitigation bank credits have been purchased for all E2F01 and E2F02 impacts that did not occur on Bayou Sauvage National Wildlife Refuge. Construction of the Milton Island Project is complete. Construction of the Turtle Bayou and Bayou Sauvage projects are approximately 90% complete. Construction of the New Zydeco Ridge Project is 20% complete.	2021

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19	MVD	MVN	Larose to Golden Meadow, LA *	100	100	4598	4598	The required and authorized mitigation for the Larose to Golden Meadow 1985 Hurricane Protection Project calls for construction of a levee and water-control structure along the eastern boundary of the Pointe-au-Chien WMA Mitigation Site. These features will provide mitigation for the aforementioned impacts by enhancing the functional values of wetlands within the 4,598 ac mitigation site.	The primary component of the 1985 Mitigation plan involved construction of a 7-mile long levee and 3 water control structures (weirs). These features were the backbone of a regional water management system intended to enhance existing degraded wetlands within the mitigation site proper. This site encompassed 4,598 ac in the publicly owned Pointe-au-Chien Wildlife Management Area. Construction of the levee and weirs has been completed and indications are that enhancement of wetland habitats in the mitigation site is progressing favorably. The mitigation plan does not include specific success criteria or a monitoring program.	2035
20	MVD	MVN	Fed N.O. to Venice (New Orleans to Venice (NOV) Hurricane Risk Reduction Project)	0	20	698	0	Estimated mitigation AAHUs from constructing NOV 05, NOV 07, NOV 09, NOV 10, NOV 11, and (NOV 02, NOV 06b, NOV 08b, NOV 13, NOV 14, P14A, P17A) and for NFL Section 1, NFL Section 2, NFL Section 3, NFL Section 4, Section 2+4 Canals and Access Road, and Section 5 is approximately 191.5 AAHUs for BLH and swamp impacts, and approximately 53 AAHUs for fresh marsh impacts. Compensatory Mitigation for 105.6 AAHUs of impact to intermediate, brackish and saline marsh habitats will be addressed in a supplemental NEPA document.	A total of 36.77 AAHUs have been acquired to date by purchase of Mitigation bank credits for Fresh marsh impacts and a total of 17.53 AAHUs of Mitigation bank credits have been acquired for BLH impacts.	2023

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21	MVD	MVN	MTC MRL Construction Program, IA, NE, KS, & MO (Missouri River Levee System)	64.0	83	85	75.4	There are three elements to the mitigation requirements: (1) remaining work items in the 1998 supplemental EIS, which is 4/8 ac of creation/establishment of forested wetlands; 2) Black Hawk levee slide, which is 3.35 ac of commercial mitigation bank forested wetlands; and 3) Old River Seepage, which is 2.25 ac of commercial mitigation bank forested wetlands.	20 of the 24.8 ac of mitigation necessary to compensate for impacts of work items included in the 1998 supplemental EIS have been reforested on Corps-owned property. In FY 2016, credits were purchased from two individual commercial mitigation banks to compensate for the 26.6 ac of impacts resulting from the Pointe Coupee Seepage work item and 0.8 ac of impacts resulting from the Algiers Forebay Stability Berm work item. No mitigation has been accomplished for the 3.35 ac of impacts resulting from the Blackhawk Levee Slide work item and the remaining 2.24 ac of impacts resulting from the Old River Seepage work item. A current combined total of 5.6 ac of impacts still requires mitigation for the Operation Watershed projects. The plan to provide mitigation is to purchase credits in commercial mitigation banks within the watersheds where the work items are located. The information in this database will be updated as credits are acquired. FY2018 no additional mitigation was accomplished.	2025
22	MVD	MVN	West Bank and Vicinity (WBV), FCCE - New Orleans, LA	34.3	100	2002.2	2013.5	Mitigation has been completed for 562.2 ac at the Netherlands site and 125 ac at bayou Segnette. The remaining mitigation requirement associated with the previously authorized mitigation plans is 1,211 ac of swamp/BLH preservation; 12.8 ac of BLH-dry restoration; 90.9 ac of BLH acquisition, preservation, and management at the St Charles site.	Partial mitigation has been completed for Swamp, BLH, and marsh of ~562.5 ac (351 AAHUs) of marsh. No monitoring was required for this work. Construction was completed at Bayou Segnette and initial success monitoring is scheduled for Oct 2019. St Charles mitigation is still in design phase.	2021

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23	MVD	MVN	West Bank and Vicinity (WBV), West Closure, LA	14.3	98	1115.8	1115.8	The programmatic IER presenting the plan for mitigating the WBV impacts was finalized in 2014. This document allowed the immediate purchase of mitigation bank credits for the PF01 impacts, but required additional NEPA documentation to implement the Corps constructed projects in the plan once advanced design was complete. The purchase of mitigation bank credits for a portion of the PF01 impacts is complete. A supplemental programmatic IER 37 has been completed for the remainder of the PF01 impacts. A Tiered EA and supplemental EA 548 for the PEM1, E2F01, and E2F02 impacts occurring on JLNHPP is complete.	JLNHPP BLH Restoration, Swamp Enhancement, Avondale Gardens, Yankee Pond, and Geocrib projects are under construction.	2022
24	MVD	MVP	Mississippi River: Lock and Dam 3 Navigation Safety and Embankments, MN and WI	100	100	562	562	The construction of the Upper Mississippi River Lock and Dam 3 Embankment Improvement project resulted in the loss of 67 ac of floodplain forest and 20 ac of channel border habitat. Interagency coordination determined that given the limited opportunities to provide functional mitigation features for affected channel border aquatic habitat in a cost effective manner, resource agencies concurred that an acceptable mitigation approach is to focus primarily on BLH restoration combined with freshwater marsh features. Restoration of 313 ac is required.	562 ac was required to be purchased in fee title to acquire enough land suitable for restoration. Grading, ditch plugs and re-routing of previously-modified drainage channels were successful in restoring natural hydrologic regime to key portions of the mitigation area. A total of 313 ac have been direct seeded or planted with seedlings or cuttings to initiate forest restoration. Supplemental plantings were completed in 2012 on areas with less than expected results. Monitoring in Summer 2013-2018 indicated that revegetation efforts are on track to meet criteria for success by 2022.	2022
25	MVD	MVR	B5 Mississippi Dredged Material Management (Hurricane Island Reach, Pool 11), WI	0	30	12	0	12 ac of wetlands mitigation is required to offset impacts at placement site.	Site preparation begin in 2018 and will conclude by 2024.	2024

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26	MVD	MVR	B5 Mississippi River DMMP (Pool 13 Site Plan for the Sabula Reach (includes 4 dredge cuts)), IL**	50	50	12	6	12 ac of island creation at two locations (~6 ac of island at each site). MVR anticipates ~ 6 to 10 ac of wetlands would develop within the downstream "coves" or "shadows" of the islands through sediment accumulation and other natural processes. The banks of the islands would be armored with riprap to prevent erosion and to provide additional aquatic habitat (e.g., catfish spawning areas).	MVR built 1 of 2 mitigation islands (6 of the required 12 ac) in 2006. No construction or mitigation was done in 2018. Excellent emergent wetland vegetation has grown on the island and in the shallows surrounding the island. Waterfowl, fish, and mussels are using the constructed habitat. Mitigation success has been met at the 1 st island. Since MVR has not built the remaining 6 ac, no monitoring is required at this time. As of Oct 2018, MVR does not anticipate needing to build the 2 nd mitigation island in the near future.	2025
27	MVD	MVS	Chain of Rocks, IL *	100	100	146.4	253.1	Habitat losses or impacts related to project construction were estimated at 59.0 ac of wetlands. (30.8 ac forested, 28.2 ac herbaceous) and 11.7 ac of non-wetland bottomland forest. Mitigation will consist of the development of 146.4 ac of habitats, including 134.7 ac of wetlands (92.4 ac forested and 42.3 ac herbaceous) and 11.7 ac of non-wetland bottomland forest.	In 2000, a 14-ac wet prairie was constructed. In 2004, 62 ac of forested wetlands and non-wetland forest were established. In 2008, a 97-ac tract was acquired for establishment of 34 ac of forested wetlands, 1 ac of herbaceous wetlands, and 54 ac of non-wetland forest, and protection of 8 ac of forested wetlands. In 2010/2011, site grading and vegetation plantings were accomplished on the 97-ac tract. In 2014, a 75-ac tract was acquired to complete the project's mitigation requirement, and construction of 35 ac of created herbaceous wetlands and forested wetlands was completed.	2024
28	MVD	MVS	Monarch-Chesterfield, MO	100	90	93.5	101.5	Total mitigation required is 93.45 ac. The initial mitigation requirement for creation of 9.2 ac of emergent wetlands and 6.8 ac of forested wetlands changed to preservation of 73 ac of forested wetlands and restoration of 14 ac of cropland due to proximity to an airport. The plan also includes the purchase of 6.45 mitigation banking credits (originally creation of 4.3 ac of open water wetlands at a distance from airport. Changed to 1.5:1 ratio due to time lag.	Construction completed for preservation of forested wetlands; in 2006 95-ac tract acquired and conservation easement placed on property. In 2010 native grasses planted within this tract in 14-ac crop field to allow for reforestation through natural succession. In 2010 planning commenced for the establishment of 4.3 ac of open water wetlands. Currently Corps (Regulatory and Environmental), MO Department of Conservation, and the landowner are developing a restoration plan to address the portion of the mitigation area that was altered in 2016. In 2016 an available mitigation bank was identified (Big Rivers), and 6.45 credits were purchased at 1.5:1 ratio on original 4.3 ac identified.	2024

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29	NAD	NAN	Green-Brook, NJ (Segment U)	100	65	85	85	This Mitigation is for the Bound Brook construction element of the overall project; (Segments A, N, R1, R2, T, and U) and a portion of structural project elements proposed in Middlesex County that could not be mitigated on-site. The mitigation plan was to provide in-kind mitigation for 21 ac of wetlands impacted by the Green Brook Flood Control Project. The project also includes the enhancement of ~32 ac of existing forested wetlands, 6 ac of scrub-shrub wetland, 5 ac of emergent wetland and preservation of 6 ac of palustrine, 6 ac of upland forest and 27 ac of riparian forest and 800 lf of an unnamed stream.	The Finderne site was completed in 2006. To ensure compliance with Corps policy and the NJ DEP wetland mitigation regulations, the mitigation site was monitored for 5 full growing seasons. The site has met the hydric soil and wetland hydrology criteria as confirmed by a wetland delineation conducted in 2014. The site has not met the 85% plant survivability criteria nor the less the 10% aerial coverage of invasive plant species criteria. Adaptive management measures in the form of comprehensive invasive species management program involving herbicide treatments and mowing/cutting will be initiated in the spring of 2019 with replanting of native vegetation species in the Fall of 2019.	2024
30	NAD	NAN	Minish Park, NJ (Joseph G. Minish Waterfront Park and Historic Area)	0	66.6	1.7	0	1.68 ac of mitigation is required for impacts to tidal mudflats.	The originally proposed mitigation site was removed from consideration due to the Superfund status of the project area, so no mitigation has been completed. As a result of Hurricane Sandy Disaster relief, funds have been appropriated to seek/select/develop the required new site alternative to meet the mitigation requirements. Estimated date of success has been delayed by 3 years as site for mitigation has not yet been found, due to widespread HTRW issues in the watershed. Working with local sponsor, NJ DEP to find site perhaps in contiguous watershed.	2026

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31	NAD	NAO	Craney Island Expansion, VA	46.3	10	122.2	122.2	Mitigation involves a total of 122.2 ac as follows: 56 ac of saltmarsh wetlands, 16 ac of oyster reefs, and 50.2 ac of sediment clean-up. As identified in Final EIS, synergistic benefits provide 487 ac of compensatory mitigation in the Elizabeth River watershed. Mitigation is required per the EIS.	Mitigation is required per the EIS for impacts to 522 ac of open water & benthic habitats. 11 ac of mitigation wetlands were constructed at Paradise Creek, VA. Construction started in 2010 and was completed in 2012. Monitoring for percent cover and invasive species began in 2013. Restored wetland vegetation is growing on site at present and has met expectations for growth and survival. In 2013, Oyster reef construction began for 5 reefs. Mitigation reef construction was completed in 2014 and annual monitoring of the reefs is ongoing for abundance, biomass, and demographics. Completion date extended to allow for sufficient monitoring and adaptive management. 1 site may need additional shells due to scattering by nearby barge traffic.	2026
32	NWD	NWS	Shoalwater Bay Erosion, WA	0	100	0	0	Mitigation is dependent upon the presence of Dungeness crab and snowy plover at the time of construction and during beach nourishment cycles. During construction, the impact areas were surveyed for the presence of these species and the survey results determined that no mitigation was required for construction. After the initial placement, mitigation might be required for any adverse impacts to crabs and snowy plovers due to the periodic beach nourishment work (~ every 5 years). Placement activities will be monitored and mitigation formulated if needed. Habitat development will be monitored to assess if restoration is meeting projected targets	No mitigation sites are available to evaluate yet. Initial crab trawl data for 2012 was analyzed in FY2015 versus dredge amounts to determine if mitigation is required. NWS determined that no mitigation will be required for the initial placement. This finding is being vetted with resource agencies. Snowy Plover nested on beach in 2012. Currently the site has developed to the point where there is the largest concentration of snowy plover nests in WA. Construction operations were altered to avoid disruption to sites. Mitigation will be adaptively managed based on survey results for Dungeness crab and snowy plover. Crab trawls in 2018 indicated no crab mitigation is required.	2035

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33	NWD	NWS	Howard Hanson Dam (HHD), Additional Water Storage Project, Phase I, WA	98.6	85	368.7	368.7	Corps received a draft BiOp from NMFS and is currently reviewing for ESA conservation measure requirements for HHD project and mitigation requirements for the Additional Water Supply (AWS) project. Until that issue is resolved no further actions will be taken on the AWS Mitigation Plan. Mitigation consists of: 1. instream habitat restoration through culvert replacement engineered logjams and side channels. 2. riparian planting, thinning, protection and conservation, management of forest, pasture and emergent marsh. 3. creation of elk forage habitat.	Set aside and managed 238 ac riparian buffer/managed forest, 12.7 ac instream habitat plus 118 ac of elk pasture. All the areas are being monitored. The emergent elk pasture has not has not developed as planned and is being monitored to determine the conditions required for success. There were 4 culverts replaced, 1,198 logs placed in logjams, and 1/2 ac of side channel created as mitigation. For the fish mitigation sites, preliminary monitoring has determined that on average the sites are performing as expected providing the intended improved habitat structure for aquatic organisms. The monitoring results have been inconclusive to date. Until review of BiOp from NMFS complete and requirements resolved, no further actions will be taken on the AWS Mitigation Plan.	2022
34	SAD	SAC	Charleston Hbr, SC - Post 45ft	50	10	698	0	Purchase and preserve ~ 665 ac of wetlands, and create ~ 33 ac of artificial reef habitat (for total of ~698 ac to be mitigated).	~1150 ac of upland forest and forested freshwater wetlands have been purchased and will be transferred to DOI for incorporation into the Francis Marion National Forest in 2019. Acquisition will be considered complete at that time. 2 offshore artificial reefs, totaling ~33 ac, are currently being constructed and will be completed in late 2018 or early 2019. Monitoring for benthic recruitment will begin in 2019. Both actions serve to mitigate for loss of habitat, the first for wetlands and the second for hard-bottom habitat, due to deepening of the Charleston Harbor.	2023
35	SAD	SAJ	Miami Harbor Deepening, Miami Harbor Phase III Expansion, FL	100	100	36.4	36.4	The seagrass mitigation shall consist of filling a portion of the dredge hole on the north side of the Julia Tuttle Causeway to restore at least 16.6 ac of a seagrass community. At a minimum, 7.15 ac of the mitigation area within the filled mitigation site shall be planted with seagrass. A total of 11.6 ac of artificial reef shall be constructed at 2 locations to mitigate for impacts to corals.	Project and mitigation construction physically completed in 2015. Mitigation will undergo monitoring. Year 1 post-construction monitoring report was completed in 2015. Year 2 monitoring of the artificial reef was completed in 2016. Year 3 report was completed in 2017, Year 4 (final) report completed in Oct 2018. Year 3 (DEP granted time extension due to IRMA) data collection and report writing for the Julia Tuttle mitigation site is expected to be complete Nov 2018. (Raw data submitted 2 Nov 2018). Year 4 data collection and report for the mitigation sites are complete. Currently in final year of monitoring. On track for 2020 completion.	2020

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36	SAD	SAJ	Mile Point, FL	0	50	18.2	18.2	Using the Uniform Mitigation Assessment Method, 18.84 ac of salt marsh mitigation is required to offset habitat loss. Loss of oyster habitat shall be offset by creating intertidal habitat along the west leg of the new training wall (0.76 ac) and reconfiguration of the east leg training wall (0.37 ac), total of 1.13 ac. Additional oyster habitat would be created by the construction of tidal channels within the restoration area at Great Marsh Island (in excess of 1.6 ac).	Awarded contract in 2015. Physical completion of Phase I occurred and CSU repairs completed in FY2017. Mitigation area required to settle for 1 year before Phase II commencement. Phase II construction scheduled to be begin FY2020 and be completed by FY2021. Scheduled to access and monitor for 5 years after the completion of Phase II.	2026
37	SAD	SAJ	Intracoastal-Waterway CR to AR (Maintenance Dredging, Cuts M-5, M-12, and M-14 and Longboat Pass cuts 2 and 3, Manatee County, FL)	0	100	0.7	0.7	Repair previously damaged (prop scars and blowouts) sea grass habitat with appropriate material to the appropriate elevation to support sea grass. However, since pre- and post-construction monitoring indicates only a very small amount of impact, SAJ is asking Florida DEP to remove the mitigation requirement from the permit/WQC.	Initial post-construction survey indicates 0.40 ac of sea grass impacted. Additional post-construction monitoring indicates only 0.1 ac of impact. Because pre- and post-construction monitoring indicate only a very small amount of impact (.1 ac), SAJ is coordinating with Florida DEP on the request to remove the mitigation requirement from the permit/WQC. Meetings being held in Jan and Feb 2019.	2020
38	SAD	SAJ	Intracoastal-Waterway Jacksonville-Miami, FL (Construct Upland Disposal Sites IR-2 and SL-2) **	100	100	7.2	7.2	Create 5.95 ac of wetland mangrove and upper marsh and obtain perpetual conservation easement over an additional 1.23 ac of on-site wetlands.	(1) 5.95 ac of wetland mangrove and upper marsh created from a former citrus grove by grading to establish hydrology and by planting. (2) perpetual conservation easement over an additional 1.23 ac of on-site wetlands. (3) Monitoring ongoing. Baseline mitigation monitoring report, April 2013, indicates presence of native wetland and aquatic species. Planted red mangroves in one area are struggling. 3 rd year of annual monitoring in 2016 indicated loss of red mangroves in this area. 5 th and final mitigation monitoring report dated April 2018 indicated mitigation success. Coordination with USFWS and NMFS on final success of mitigation on-going.	2019

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39	SAD	SAJ	San Juan Harbor, PR	0	100	4	4	1.2 ac marine submerged aquatic vegetation established by raising and stabilizing bottom (to approximately -12 ft to -15 ft below the surface).	Mitigation not yet started. Mitigation has been relocated. No longer requires an LRR (if cost keep below cost increase limits of Section 902 for the Navigation project). In 2015, the EA/FONSI for the new mitigation site in Condado Lagoon was completed. Previous mitigation contracts were not awarded because there were no bidders. Anticipate completion of all environmental compliance and award contract for mitigation with award contract for deepening (post FY2019).	2021
40	SAD	SAM	Tennessee - Tombigbee Waterway (TTW) (Bevill Cross Current), AL *	100	100	50	54.2	Compensatory mitigation is a 3-part plan addressing impacts to TTW Wildlife Mitigation lands, aquatic habitat, and BLH wetlands along with a species specific management plan. The plan includes 1) preservation of 12 ac of predominantly BLH and wetlands of similar quality to those impacted, 2) control and removal of invasive/exotic species from 16 ac of Corps controlled surface waters, and 3) enhancement of 22 ac of BLH through control of invasive/exotic species on Corps controlled reserve properties not currently bound by previous management agreements.	Appropriate mitigation lands acquired for functional replacement of the impacted habitat as mitigation for the Bevill Cross Current project. Construction of this project was completed in late 2010. Annual surveying and monitoring were performed in Aug and Oct 2017 for spot treatment of invasive species to prevent re-infestation and herbicide treatments performed. Based upon the close coordination with the USFWS and their response letter Feb 2018, the mitigation requirements have been satisfied. These lands were originally identified as part of the TTW Wildlife mitigation project in 1983. Given this mitigation effort, these lands were managed to ensure wildlife credits off set adverse impacts identified by the proposed project. As such, the USFWS concurred with the mitigation (i.e. habitat quality). These lands will be actively managed (i.e. herbicide treatment) by the Corps in perpetuity.	2018 (a)

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41	SAD	SAS	Savannah Harbor, GA	100	100	1769	1411	In order to mitigate for the 311 ac of salt marsh lost a Long Term Management Strategy EIS was developed. The plan commits SAS to providing bird habitats as follows; an annual production of 74 ac of bare ground nesting, 450 ac of wetland nesting, 505 ac of waterfowl feeding, and 740 ac of shorebird feeding. At the end of a 6 year cycle, SAS should be in compliance with each of the habitat acreages.	The EIS requires SAS to take the 6 year rolling average of each habitat type and report on mitigation status. For FY2017, a lack of wetted areas within the DMCAs caused the project to produce 1,481 AAHUs of wildlife habitat, less than the annual mitigation requirement of 1,769 AAHUs. Both shorebird feeding habitat and wetland nesting habitat acreage were impacted as a result of the lack of wetted areas. Success is determined by calculating annual production of acreages for each type and at the end of a 6 year cycle determining the cumulative balance as discussed in the 1997 Long Term Management Strategy EIS. Estimated completion date is 2047 as discussed in the EIS. Over the last 3 years, the project has been unable to meet the mitigation annual requirements. SAS is working to develop an alternative mitigation option. This alternative would be outside the Savannah Harbor Disposal areas but would still allow us to meet the necessary mitigation requirements in a more timely and cost effective manner.	2047
42	SAD	SAW	Manteo (Shallowbag) Bay, NC (O&M)	17.6	18	68	12	68 ac of oyster reef habitat in the general project area is to be constructed for the loss of 102.4 ac of estuarine shallow water habitat associated with the Manteo-Oregon Inlet channel and Old House Channel.	As of 1997, 12 of 68 ac of oyster reef habitat were constructed in association with completed project components; specifically dredged material disposal island expansion in the project vicinity (northern Dare County, NC). Monitoring of these 12 ac (6, 2-ac sites) was completed in 2000. No project construction or mitigation planning/construction occurred in FY2018.	2025

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43	SAD	SAW	Wilmington Harbor, NC	100	88	768.3	768.3	<p>Island 13 - Restoration of 30.4 ac primary nursery at Cape Fear River dredged material disposal island 13. Prevention of Degradation (POD) Lands - Acquisition of 700 ac riparian wetland habitat buffer on Northeast Cape Fear River, including river shoreline & two tributaries (Tony's and Lagoon Creeks). Protects 29 ac of estuarine PNA.</p> <p>Fish passage at Cape Fear River Lock & Dam #1 - Construction of rock rapids downstream of dam to aid anadromous fish passage. >80% passage for anadromous fishes was not met after 2 years of required post-construction monitoring.</p> <p>Tidal Freshwater Marsh Credits - Purchase of 35.5 mitigation credits for loss of 35.45 ac of marsh.</p>	<p>Island 13: Restoration of 30.4 ac marsh & intertidal habitat complete and deemed successful in 2005 after 3 years of monitoring. POD Lands: As of 2011, 700 required ac acquired (including 29 ac estuarine primary nursery area).</p> <p>Fish Passage at Lock and Dam #1: Construction of rock rapids on downstream dam face to facilitate anadromous fish passage completed in 2012. After 2013 and 2014 post-construction monitoring, 80% of flathead catfish passed Lock and Dam #1; 50-70% of shad and 21-23% of striped bass passed. Considered acceptable and successful.</p> <p>Tidal Freshwater Marsh Credits: 35.5 credits have been purchased from LCFUMB. All mitigation is complete. No further monitoring is required.</p>	2018(a)
44	SPD	SPA	Southwest Valley Albuquerque, Riparian Mitigation, NM	100	100	15	15	<p>Mitigation is required for construction of the spillway channel to the Rio Grande as it necessitated the removal of ~60 mature cottonwood trees. Mitigation entails replacing each mature tree with 10 saplings at nearby locations. 10 additional trees were required as the contractor went outside of the project boundary. The success criteria was a mean survival rate of 80% across all planting areas for 5 years after planting.</p>	<p>All 700 cottonwood saplings required were planted. In 2012 at 4 mitigation locations. Monitoring activities began in 2012, and were conducted annually through 2017. Due to lower success rates found during the 2013 monitoring, it was first thought that replacement trees might be necessary. Based on monitoring through 2017, however, they were not required since the original trees continued to thrive. Mitigation success was achieved in 2018.</p>	2018(a)
45	SPD	SPA	Rio Grande Flood, San Acacia, NM	0	0	99	0	<p>50.4 ac of tree/shrub riparian plantings. 35.1 ac of riparian grassland. 13.5 ac of aquatic habitat. Mitigation is required under NEPA and ESA (per the BiOp). For 1st phase of project construction - 9.8 m of levee by the City of Socorro (completed 2017) - mitigation not required due to levee footprint reduction. Construction of remaining San Acacia levees will not be pursued in foreseeable future.</p>	<p>Southwestern Willow Flycatcher pre-construction monitoring 2011-2015. Post-construction monitoring of flycatcher since 2017, being implemented for 3 years. No other mitigation required at this time.</p>	2035

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46	SPD	SPK	American River Common Features, Natomas Basin, CA (Natomas Reach D)	0	35	17	17	Replace in-kind Giant Garter Snake upland refugia and canal habitat lost due to new alignment of the Vestal Drain, which is potential hibernacula for the snake.	17 ac of Vestal Drain alignment is considered upland refugia habitat of Giant Garter Snake and wetland habitat (formerly rice fields). New Vestal Drain alignment will be a large canal to provide upland and canal habitat. Old Vestal Drain alignment (17 ac) will be converted to upland refugia habitat beginning around June 2019 after construction of the new drain alignment.	2020
47	SPD	SPK	American River Common Features, Natomas Basin, CA (Reach I Contract 1) **	100	100	11.1	11.1	Mitigation for removal of approximately 44 trees, mostly valley oak and California sycamore, would take place at the Novak mitigation site, which covers approximately 11 ac near the intersection of Garden Highway and Powerline Road, in Sacramento County, CA. Tree mitigation entails installing and maintaining plants until they have reached self-sufficiency. Plantings would be surveyed annually for survival for 3-4 years. Replacement plantings would be added on an as-needed basis for 2 years.	Planted spring 2018. Mitigation will be considered successful if 60% survival is reached by 2027. Plants should reach a moderate height/growth to survive most potential hazards, barring wildfire. Habitat should have height in trees with sufficient understory to support multiple species.	2027
48	SPD	SPK	American River, Folsom Outlet Mods, CA (Folsom Joint Federal Project (JFP) - Auxiliary Spillway, Phase IV) **	100	100	14	14	Mitigation for JFP Phase IV impacts to 30 native trees consists of restoring approximately 14 ac of oak woodland habitat at an off-site location referred to as the "Rossmoor Bar 14-ac Mitigation Site". This mitigation was recommended in the FWCA Report prepared for this phase of the JFP. Mitigation for JFP Phase IV impacts to jurisdictional Waters of the United States consisted of purchasing 2.5 credits from a mitigation bank for the impacts to transitional wetlands and purchasing 11.0 credits from a mitigation bank for impacts to open water. This mitigation was necessary for compliance with the CWA.	Rossmoor Bar 14-ac Mitigation Site: Easement for land acquired in 2016. Initial site preparation work and initial planting of the site to restore oak woodland habitat was completed in 2016. Mitigation to compensate for JFP Phase IV impacts to jurisdictional Waters of the U.S. was fully completed in 2013 through the purchase of mitigation bank credits. Monitoring of Oak saplings at the mitigation site will continue through 2019, with success and transfer to sponsor likely to occur between 2019 and 2021. No further mitigation performed in 2018.	2021

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49	SPD	SPK	Isabella Lake DSP, CA	69.8	1	154.7	154.7	This Dam Safety Action Classification 1 dam repair project will provide a suite of measures to remedy hydrologic, seismic & seepage defects in view of serious life safety risks.	US Forest Service lands have been identified for mitigation, along with 154 ac conservation land purchased to fulfill BiOp requirements for reoperation of the reservoir. Activities to grow plant stock for habitat mitigation, and other initial restoration measures, are ongoing. As of FY2018 the total amount of completed mitigation is at 75% of the contract.	2021
50	SPD	SPK	Sacramento River Bank Protection, CA (SAC at River Mile 77.2L) *,**	100	100	1	1	Mitigation required on-site for effects to riparian vegetation and associated habitat to include 0.71 ac of native riparian habitat, and IWM. Purchased 6.6 VELB credits (0.27 ac).	Purchased 6.6 credits (0.27 ac) for impacts to VELB from River Ranch VELB Conservation bank. After construction was completed, the 0.71 ac were replanted in 2011 with a native hydroseed mixture and native seedlings. While the site was weeded and watered for the 1st 3 years of establishment, a multiyear drought persisted through 2016, when the 5 year monitoring was mandated, and 2017 followed with extremely high flows from a very wet year. Results from the 3 rd monitoring year show all performance criteria being met except for percent vegetation cover, which missed the criteria by 8%. The site will be revisited in 2019 to determine if success criteria has been met.	2023
51	SPD	SPK	Sacramento River Bank Protection, CA (FHR at River Mile 7.0L) *,**	100	100	0.7	0.7	Following ESA consultation with the NMFS and USFWS on the levee repair along the Feather River at RM 7, the on-site mitigation for effects to riparian vegetation and associated habitat was determined to be 0.73 ac of native riparian vegetation and associated habitat, including IWM. The terms and conditions in the BiOp received from NMFS required revegetation of the disrupted area and a monitoring program for up to 5 years.	The site was replanted with 0.73 ac of native riparian vegetation for on-site mitigation in 2011. The 1 st 3 years of monitoring showed all performance criteria as being met except percent cover of vegetation, which was short by 9%. While the site was weeded and watered for these 1 st 3 years of establishment, a multiyear drought extended through 2016, when the 5 year monitoring was due to end, and 2017 followed with extremely high flows due to a very wet year. The site will be revisited in 2019 to determine if success criteria has been met.	2023

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52	SPD	SPK	Sacramento River Bank Protection, CA (LAR at River Mile 10.0L) **,**	100	100	3.2	3.2	Following ESA consultation with NMFS and USFWS the on-site mitigation for effects to riparian vegetation and associated habitat was determined to be: installation of 0.65 ac of native riparian vegetation and associated habitat, including IWM; purchase of 33.6 VELB credits (1.39 ac); and purchase of 1.19 ac of spawning habitat, with monitoring for 3 years.	33.6 VELB credits (1.39 ac) were purchased from the River Ranch VELB Conservation Bank in 2013. 1.19 ac of spawning gravel credits were also purchased from the CVPIA Spawning Gravel Augmentation Program for impacts to Chinook salmon and steelhead in 2012. The 0.65 ac mitigation site was contoured, hydro seeded and replanted in 2011; and monitoring continues. After initial success, however, and while the site was weeded and watered for the 1st 3 years of establishment, a multiyear drought continued through 2016, when the 5 year monitoring was due to end. 2017 followed with extremely high flows due to a very wet year. The site will be revisited in 2019 to determine if success criteria have been met.	2023
53	SPD	SPK	Sacramento River Bank Protection, CA (LAR at River Mile 10.6L) **,**	100	100	0.77	0.77	Following ESA consultation with NMFS and USFWS the on-site mitigation required for effects to riparian vegetation and associated habitat were identified as 0.77 ac of native riparian vegetation plus 6.43 ac of VELB credits. The BiOp terms and conditions require vegetation monitoring for a minimum of 3 years. Mitigation consists of off-site mitigation including purchase of 255.6 credits at the River Ranch VELB Conservation Bank, and 0.77 ac of on-site mitigation consisting of revegetating the site with native riparian vegetation plus integrated weed management.	SPK purchased 155.6 off-site mitigation credits for VELB. The mitigation sites have been hydroseeded and replanted to meet requirement for 0.77 ac of on-site mitigation. The site was complete for the 3-5 year monitoring obligations in 2016, with 21% of native vegetative cover the overall average for the entire site. The coverage also approached the minimum percent allowable for non-native vegetation. The site has either achieved or is within 10% of criteria to achieve successful vegetative growth, and will be monitored in 2019 and 2020 to determine compliance with the performance standards.	2020
54	SPD	SPK	Sacramento River Bank Protection, CA (LAR at River Mile 16.8) **,**	25	100	0	0	Corps purchased salmon and steelhead "restoration" credits from a NMFS-approved conservation bank to fully compensate for project impacts to salmonids. The credits is necessary to mitigate for this significant temporal loss of riparian habitat. NMFS also required willow plantings on the riparian bench, requiring a Vegetation Variance Request. Although the willow plantings are expected to offset some impacts of vegetation removal, it will take time for the willows to mature enough to fully replace the benefits lost by removing the eleven trees.	Corps purchased 1.1 ac of Salmon credits in 2017 from the Fremont Landing Conservation Bank. The planting of willows at the site is pending approval of a Vegetation Variance. Monitoring at the site will continue for 10 years per compliance obligations. By purchasing restoration credits (vs. preservation credits), there is full replacement of the temporally lost habitat features & value	2029

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55	SPD	SPK	Sacramento River Bank Protection, CA (LAR at River Mile 26.0) **, **	0	0	0.1	0.1	The Corps shall purchase salmon & steelhead credits from a NMFS-approved conservation bank to offset project impacts. Highest negative Standard Assessment Methodology. The purpose is to fully mitigate for project related effects using mitigation strategies already described in the Sacramento River Bank Protection Project (SRBPP) Phase 2 Programmatic BiOp. The construction of RM 26.0L in 2014 resulted in the loss of 0.03 ac of shallow water habitat, which will not be compensated for until the construction of RM 16.8L. To compensate for the temporal loss of shallow water habitat at RM 26.0L, the Corps proposed to construct a 0.1 ac wetland bench at RM 16.8L, which would create an additional 0.07 ac of shallow water habitat for delta smelt. As construction of RM 16.8L has not yet completed, the Corps deducted 0.07 ac of conservation credit from the Cache Slough/Yolo Bypass Mitigation Area.	Following ESA consultation with NMFS and USFWS, Sacramento River levee repairs at RM 26.0L, the Corps purchased 0.62 ac of salmonid riparian floodplain forest conservation credits from the Fremont Landing Conservation Bank in 2015. The on-site mitigation was planted in 2016, and replacement plantings were installed in 2017 due to damage and plant failure. The site has been monitored annually since 2017. As of 2018, the site met 3 of 4 performance standards, only failing in meeting the Combined Woody Vegetation Cover criterion (75%). The site is under a compliance mandate to monitor for 5 years, and to report annually on its performance.	2021
56	SPD	SPK	Sacramento River Bank Protection, CA (LAR at River Mile 71.3) **, **	30	0	0	0	The Corps mitigated for project impacts to salmon and steelhead by purchasing credits from an approved mitigation bank at a 1:1 ratio. Specifically, a total of 0.635 ac of credits were purchased. The Corps purchased 0.2 ac of delta smelt habitat at a USFWS approved delta smelt conservation bank to mitigate for loss of delta smelt spawning habitat. To offset the loss of 0.27 ac of riverine habitat, the Corps purchased 0.9 ac (rounded up from 0.81 at 3:1 ratio) of delta smelt habitat at a USFWS approved delta smelt conservation bank. Onsite mitigation features include installation of a riparian bench, IWM, and installation of fascine bundles; all incorporated into the repair design for SAC 71.3R to the maximum extent possible.	Following ESA consultation with NMFS and USFWS on Sacramento River levee repairs at RM 71.3, the Corps purchased 0.64 ac of Salmon credits in Oct 2018 from the Fremont Landing Conservation Bank. The contract for planting at the site has been awarded, but the fascine bundle installation and plantings have been delayed due to river levels that have impeded access to the bench. In 2017, the Corps purchased 1.1 Delta Smelt Preservation Conservation Credits at the Liberty Island Conservation Bank.	2024

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57	SPD	SPL	San Luis Rey River, CA *	81	100	243.2	197.7	Mitigation required for temporary & permanent impacts to waters of the U.S. and for riparian and endangered species habitat through the BiOp, CA Department of Conservation, WQC and CA Endangered Species Act permits. Listed species (vireo, flycatcher) and riparian/critical habitat mitigation overlap in most areas, totaling 241 ac to be completed in phases both on- and offsite: Pre-construction (32ac); Phase 1 (100.2ac); Phase 2 (35.4ac); Phase 3 Year 1 (51.8ac); Phase 3 Year 5 (21.6ac). Flycatcher habitat is also required (2.11ac), along with fish passage under bridges for which boulders will be reconfigured. An adaptive habitat management plan (AHMP) has been prepared.	A PACR is being prepared to increase the authorized cost, and support mitigation. Riparian habitat, including 32 ac, was established onsite before and during construction. Phase 1-3 habitat preservation is complete, and restoration begun in 2006 near complete. The Phase 1 onsite requirement (85ac) was met in 2011. More restoration and AHMP were completed in 2013 and 2014. Phase 2 and 3 drought impacts managed in 2015. Sponsor acquisition of offsite 45.5 ac is complete. Real Estate Plan and NEPA document are being finalized.	2021
58	SPD	SPL	Santa Ana River Mainstem, CA	92.1	85	3440	3440	For this multi-phase flood risk management effort spanning much of watershed, requirements under ESA, FWCA and CWA have evolved over time. Primary requirements have been to: restore 92 ac of salt marsh, 5 ac of freshwater marsh, ~1,318 ac of riparian habitat (mostly through non-native vegetation removal, with monitoring), and over 14 ac perennial stream. Added requirements included: trapping of nest-predating cowbirds; wildlife corridor improvements; implementation of Habitat Management Plan for 1,100 floodplain ac downstream of Prado Dam; and implementation of Multi-Species Habitat Management Plan for 764 ac preserve area downstream of Seven Oaks Dam.	Full restoration of: 401 ac of riparian habitat, 92 ac of salt marsh, 5 ac of freshwater marsh and 11 ac perennial stream. Partial restoration of 900 ac of riparian habitat; plus ongoing management of 1,864 ac of river wash/floodplain; and acquisition/conservation of 150 ac. Fairview Park that turned over to sponsor. Continued treating a 250 ac arundo removal site in Norco, and 80% through restoration of another 213 ac.	2025

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59	SPD	SPL	Murrieta Creek, CA	48.1	25	12.1	12.1	Phase I and IIa impacted native riparian vegetation communities & adjacent upland sage scrub. Under the FWCA, CWA and NEPA, mitigation detailed in the EIS and WQC includes an unmaintained habitat corridor in the channel bottom extending through all 4 phases to be vegetated with native cottonwood/willow. For Phase I, this corridor is ~70 ft x 3000 ft, and for Phase IIa is ~30-70 ft x 5000 ft. Mitigation also includes replanting of side slopes with sage scrub habitat. Phase I success criteria were established in a 2003 Revegetation and Monitoring Plan in coordination with resource agencies, and Phase II in a similar 2016 plan. Success metrics related to % cover & abundance of vegetation.	Revegetation of Phase I riparian corridor & adjacent side slopes. As of 2014, the project completed the 5 th year of the monitoring period. Observations as of July 2017 recorded successful establishment of a riparian corridor with high percent cover of natives, and a relatively low percent cover of non-native due to continued weeding efforts. While success criteria have been met for tree and shrub density, such other criteria as tree canopy and native cover have not been met. An additional evaluation of Phase 1 success criteria will occur in 2019.	2023
60	SPD	SPL	Nogales Wash, AZ	50.3	99	8.6	8.6	Mitigation entails on-site creation of 5.93 ac in Areas A-C with cottonwood, willow, and mesquite, with appropriate native understory vegetation, plus preservation of 2.7 ac of dense native riparian vegetation. Vegetation mitigation laid out in FWCA Report and NEPA document. Off-site mitigation entails establishment of two Gila minnow refugia. Gila minnow mitigation is laid out in the 2005 BiOp from USFWS. Monitoring and success criteria are to be developed with USFWS prior to implementation. A portion of the original project was de-scoped, and all outstanding mitigation may not be required. Evaluation of mitigation requirements cannot be completed, however, absent further funding.	Local sponsor has acquired 2.7 ac of willow/cottonwood riparian habitat for preservation. Revegetation of 3.28 ac of willow/cotton wood riparian in Area A is complete but was partially unsuccessful due to improper O&M of the irrigation system by local sponsor. As of Nov 2018, no changes have occurred. Further evaluation of mitigation success or work to bring mitigation into compliance will not occur without funding (project is at Section 902 funding limit so additional work cannot proceed).	2020

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61	SPD	SPL	Rio De Flag - Flagstaff, AZ	0	52	3	1.2	Mitigation planting for impacts to cottonwood/willow and to wetland emergent vegetation is comprised of cattail, rushes, horsetail and sedges; and includes installation of 3.0 ac of riparian and wetland habitat preceded by exotic weed/invasive removal. ~1.2 ac will be mitigated on-site, and 1.8 ac off-site, under CWA commitments. The 2000 EIS addressed mitigation for temporary and permanent impacts under both the FWCA and CWA.	No mitigation has been accomplished to date. Construction has been delayed due to problems with previous work. The Clay Ave Wash Detention Basin (CAWDB) was finished in 2009, but deficiencies were identified in 2010. The CAWDB reconstruction was completed in Fall 2014. There has been a recent delay in the award of the Rio de Flag mainstem channel design. Mitigation is required for resources that will not be impacted until later in the construction process within the mainstem of Rio de Flag channel. A LRR for construction of the Rio de Flag was completed in 2016.	2032
62	SPD	SPL	Tucson Drainage Area, AZ	0	100	5.5	5.5	Compensatory mitigation requirements include 5.5 ac of mitigation to replace 4.1 ac of palo verde, mesquite, white thorn, and salt brush that would be impacted by construction of the flood detention basin complex. A draft Adaptive Habitat Management Plan was developed, and mitigation planting at Basin 1, 2 and 3 began in 2012. It was completed in 2014/ 2015. Monitoring started after the mitigation was completed in 2014/2015. For the project to perform, an additional FRM channel is proposed, called Arroyo Chico Channel. Associated mitigation requirements will be documented in an EA under development.	Mitigation of the initial required 5.5 ac is complete. Per annual monitoring conducted in 2014, survival was 90%. Annual monitoring was conducted in 2015, and results indicated an increase in biota. Preparation of a draft adaptive management plan was also completed. A Sep 2017 site visit by Corps to the Tucson Drainage Area Project included a visual examination of Basins 1, 2 and 3; at which time it was reported that the mitigation area was performing well. To ensure mitigation success criteria are met, the Corps awaits the 2018 and 2019 annual monitoring report(s) from the project sponsor. 2019 remains the best estimated date for meeting success criteria for this initial phase.	2019
63	SPD	SPN	Oakland Harbor Deepening 50 ft, CA	92	100	15	15	Proposed dredging activities resulted in the direct removal and loss of eelgrass bed habitat. Mitigation for the potential loss of 5 ac of eelgrass bed includes establishment of 15 ac of eelgrass bests through the placement of dredged-material substrate in Middle Harbor Enhancement Area. Mitigation would be monitored for 10 years in accordance with NEPA, ESA and EFH requirements.	100% of the dredged material has been placed in the Middle Harbor area. Although 0 acres of habitat have been fully restored, mitigation activities accomplished in 2012 included additional material settling and initial bottom contour shaping. Funding for the project was not received in 2013 or 2014. Project construction, which consisted of final shaping, lowering of the rock containment walls, creation of the educational marsh template and construction of rock bird islands was completed in summer 2016. 2017-2018 monitoring shows that the modeled physical conditions have been achieved. Phase I planting is scheduled for Spring 2019.	2028

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64	SPD	SPN	Upper Guadalupe River, CA	23	20	22.5	22.5	The authorized FRM project will cause loss of moist and dry riparian forests (total of 11.54 ac) and wetlands (1.1 acres); plus impacts to 5,395 lf of shaded riverine habitat. Restoration of stream habitat and the riparian zone in six reaches of the Upper Guadalupe River will compensate for construction impacts. Riparian forest will be mitigated on a 1.85:1 basis, and wetland and shaded riverine habitat on a 1:1 basis. Primary species benefiting from mitigation are the listed Central California Coast Steelhead Trout Endangered Species Unit in the river, and many species of migratory birds in the riparian forest. The basis for these mitigation requirements is NEPA, FWCA, ESA and WQC.	Construction to date has restored stream morphology, aquatic habitat, floodplains, and riparian forest in 2 reaches. Final planting was complete in Dec 2017. Riparian forest mitigation success was delayed by drought in 2013-2015, but is now doing well and habitat conditions are rapidly improving. Monitoring started in 2013 in one reach and 2015 in other; to date goals nearly all met. Aquatic habitat doing well and benefiting from shade from riparian forest. Stream morphology stable. Listed fish species spawned in one restored area.	2024
65	SWD	SWF	Waco Lake, TX	60	100	1540	1540	Increasing water storage impacted 712 ac of riparian BLH forest. Mitigation required the acquisition and reforestation of 1540 ac of land and included creating 174 ac wetland.	All lands for mitigation have been acquired. The 174 ac of emergent wetlands have been established and success has been met. 220 ac of riparian woodlands have been established and the success criteria have been met, making a total of 394 ac of mitigation requirements completed. An additional 186 ac were planted in FY2011 and are doing well, but have not meet the success criteria. In FY2014, the City of Waco planted/replanted 74 ac in mitigation site MX-3, however, survival was very low (~10%) due to continued drought. No other sites have met the success criteria. In FY2018, the City of Waco continued to plant trees, primarily in the MX-3 site and has achieved 60% survivorship to date. Monitoring survivorship of the planting efforts continues.	2030
66	SWD	SWF	Central City, Fort Worth, TX	0	5	148.6	148.6	Mitigation requirements include development of 1.43 ac of emergent wetland, establishment of 76.2 ac of riparian woodland, and establishment of 45.5 ac of upland forest.	Mitigation is onsite and project features have to be constructed before mitigation features can be completed; however, channel for mitigation has been completed. Construction is underway. Mitigation costs may be adjusted as Lewisville Aquatic Ecosystem Research Facility may be brought in to facilitate mitigation efforts. No mitigation efforts have taken place in FY2018.	2025

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67	SWD	SWF	Dallas Floodway Extension, CON, TX	0.4	25	1540.1	1540.1	Acquisition, planting, and management of 1,179 ac of additional project lands.	All areas were planted/replanted and are waiting on the plants to mature to determine when success criteria will be met.	2025
68	SWD	SWF	Wharton/Onion, Lower Colorado River Basin (Yarabee Bend and Timber Creek NED/NER), TX	0	0	0	0	The proposed Wharton Project will include the construction of 144.9 ac of forest, shrub, and native prairie habitat and the creation of 39.9 ac of wetlands.	No mitigation efforts have taken place in FY2018. PED of mitigation is expected to take place in FY2019. The mitigation is required for Wharton; Onion and Yarabee Bend, Timber Creek are combined NED/NER plans and no mitigation is required.	2026
69	SWD	SWG	Brays Bayou, TX	34	80	23.6	23.6	Construction of 27.9 ac of wetlands in Willow Waterhole Detention Basin in project area. However, as of 2014, only 23.6 ac of wetlands have been impacted by project construction. 4.3 ac of wetlands identified in a potential disposal area were not impacted because the disposal area is now not needed for the project and will not be constructed. As such, Harris County Flood Control (HCFCD), the NFS, has coordinated a reduction in mitigation from 27.9 ac to 23.6 ac. This plan is described in a summary update from HCFCD.	10.82 ac of wetlands at Willow Waterhole Detention Basin have been constructed. The revised mitigation requirement is for construction of 23.6 ac of wetlands. The remaining wetlands are scheduled to be constructed FY2019.	2022
70	SWD	SWG	Corpus Christi Ship Channel, LaQuinta Extension, TX	95	100	15	15	Impacts to seagrasses would be mitigated through creation of 15 ac of submerged aquatic vegetation in Beneficial Use (BU) Site GH.	Mitigation consists of planting 15 acres of seagrass (<i>Halodule wrightii</i>) in BU site GH after sediment has consolidated sufficiently for planting. Surveys are to be conducted in FY2019 to determine how much seagrass has naturally returned, coordination with TX Parks and Wildlife Department and USFWS will determine how much additional seagrass will need to be replanted, and plantings are anticipated to begin in FY2019. Latest observation (Fall 2018) shows 95% seagrass survival and success by 2020 is expected based on monitoring.	2020

	Division	District	Project Name	Percent Mitigation Physically Complete	Percent Project Physically Complete	Mitigation Total Acres of Land Required	Mitigation Total Acres of Land Acquired	Mitigation Requirements	Mitigation Accomplishments to Date	Estimated Date of Success
71	SWD	SWT	Canton Lake, Dam Safety, OK	100	100	220	220	Required mitigation included relocation of existing prairie dog town impacted by project construction and replacement of lands licensed to the OK Department of Wildlife Conservation (ODWC) and impacted by construction.	All mitigation activities are complete. Prairie dog town moved before construction in coordination with USFWS and ODWC. Acquired lands are now part of the ODWC license area and managed by that agency. Monitoring was not required. In Nov 2018, final minor activities for leased lands were completed, associated with water well installation.	2019

* The requirements of Section 906 of WRDA 1986 is not applicable to the project since the authorization pre-dates WRDA 1986.

** Mitigation for these projects is managed programmatically over the geographic scope of the system. System-wide mitigation is progressing concurrently with construction.

TABLE 3. FY2018 COMPLETED MITIGATION PROJECTS INTERAGENCY CONSULTATION

Division	District	Project Name	Mitigation % Physically Complete	Mitigation Requirements	Consultation Date and Agency, Office, and Title of Party Consulted	Evaluate Ecological Success to Date	Likelihood of Success	Timeline for Achieving Success (fiscal year)
MVD	MVM	West Tennessee Tributaries, TN	100	Required 32,000 ac of compensatory mitigation for an FRM project along the Obion and Forked Deer Rivers and tributaries in TN. Only 13,567 ac of mitigation required for portion of project actually constructed. Mitigation involved purchasing of lands to be owned by the Tennessee Wildlife Resources Agency.	Tennessee Wildlife Resources Agency acknowledged receipt of 13,567 ac of lands in 1992.	The unconstructed portion of the project was deauthorized in WRDA 2018. Mitigation for the constructed portion is complete, and has been turned over to the State; no other mitigation is required. Prior to de-authorization, ~42% of the project was constructed and 42.4% of the required lands for mitigation was acquired. 13,567 ac of lands were purchased and turned over to the Tennessee Wildlife Resources Agency. Mitigation requirements are determined to be complete and successful.	High	2018
SAD	SAM	Tennessee - Tombigbee Waterway (TTW) (Bevill Cross Current), AL	100	The Corps implemented a three part plan addressing impacts to TTW Wildlife Mitigation lands, aquatic habitat, and bottomland hardwood wetlands along with a species specific management plan. The plan includes 1) preservation of 12 ac of predominantly bottomland hardwoods and wetlands of similar quality to those impacted, 2) control and removal of invasive/exotic species from 16 ac of Corps controlled surface waters, and 3) enhancement of 22 ac of BLH through control of invasive/exotic species on Corps controlled reserve properties not currently bound by previous management agreements.	28-FEB- 2018 – USFWS	Acquisition of appropriate mitigation lands for functional replacement of the impacted habitat for the Bevill Cross Current project and associated impacts to 50 ac of wildlife mitigation lands, bottomland hardwoods and emergent vegetation due to dredging and disposal activities. Construction of project was completed in 2010. Annual surveying and monitoring were performed in Aug 2017 and Oct 2017 for spot treatment of invasive species. Based upon the close coordination with the USFWS and their response letter Feb 2018, the mitigation requirements have been satisfied to offset the impacts of removing a portion of the island and dredging; removing dogleg and 100 ft of existing spur dike; dredging the upper approach; and constructing a system of 9 submerged bendway weirs. These lands were originally identified as part of the TTW Wildlife mitigation project in 1983. Given this mitigation effort, these lands were managed to ensure wildlife credits off set adverse impacts identified by the proposed project. As such, the USFWS concurred with the mitigation (i.e. habitat quality). These lands will be actively managed (i.e. herbicide treatment) by the Corps in perpetuity.	High	2018

Division	District	Project Name	Mitigation % Physically Complete	Mitigation Requirements	Consultation Date and Agency, Office, and Title of Party Consulted	Evaluate Ecological Success to Date	Likelihood of Success	Timeline for Achieving Success (fiscal year)
SAD	SAW	Manteo (Shallowbag) Bay, Wanchese Harbor Mitigation, NC	100	Mitigation is construction of 42 ac of aquatic habitat (oyster reef). This is mitigation requirement for the only project components to be constructed, including deepening of Wanchese Harbor.	23-SEPT-16 - NC Division of Mitigation Services. 25-MAR-16 NC Division of Marine Fisheries. 7-JUL-15 USFWS 3-JUN-14 Oyster Steering Comm multiple state and federal agencies. 1-AUG-13 NMFS	This 42-ac mitigation requirement was satisfied in Oct 2016 via mitigation credits (Estuarine Subtidal Reef-Mollusk habitat) purchased through the NC Division of Mitigation Services.	High	2016
SAD	SAW	Wilmington Harbor - 96 Act, NC	100	Mitigation consisted of: 1) Island 13 - Restoration of 30.4 ac primary nursery at Cape Fear River dredged material disposal island 13. 2) Prevention of Degradation (POD) Lands - Acquisition of 700 ac riparian wetland habitat buffer on Northeast Cape Fear River, including river shoreline & 2 tributaries (Tony's and Lagoon Creeks). Protects 29 ac of estuarine PNA. 3) Fish passage at Cape Fear River Lock & Dam #1 - Construction of rock rapids downstream of dam to aid anadromous fish passage. 4) Tidal Freshwater Marsh Credits - Purchase of 35.5 mitigation credits for loss of 35.45 ac of marsh.	01-DEC-17 Lower Cape Fear Umbrella Mitigation Bank (LCFUMB) -Various entities. Sep 2005 success consultation with NC Division Marine Fisheries for work at Island 13. Lock and Dam #1 fish passage consultation in 2014 determined satisfactory completion.	Island 13: Restoration of 30.4 ac marsh & intertidal habitat complete and deemed successful in 2005 after 3 years of monitoring. POD Lands: 700 ac acquired (including 29 ac estuarine primary nursery area) as of Jun 2011. No monitoring required. Fish Passage at Lock and Dam #1: Construction of rock rapids on downstream dam face to facilitate anadromous fish passage completed in Nov 2012. After 2013 and 2014 post-construction monitoring, 80% of flathead catfish passed Lock and Dam #1, 50-70% of shad and 21-23% of striped bass passed. This is deemed acceptable and successful. Tidal Freshwater Marsh Credits: 35.5 credits have been purchased from LCFUMB. All mitigation complete. No further monitoring is required.	High	2018

Division	District	Project Name	Mitigation % Physically Complete	Mitigation Requirements	Consultation Date and Agency, Office, and Title of Party Consulted	Evaluate Ecological Success to Date	Likelihood of Success	Timeline for Achieving Success (fiscal year)
SPD	SPA	Southwest Valley Albuquerque, Riparian Mitigation, NM	100	Mitigation is required for construction of the spillway channel to the Rio Grande as it necessitated the removal of approximately 60 mature cottonwood trees. Mitigation entails replacing each mature tree with 10 saplings at nearby locations. 10 additional trees were required as the contractor went outside of the project boundary. The success criteria was a mean survival rate of 80% across all planting areas for 5 years after planting.	1-DEC-2017. USFWS and State resource agencies.	All 700 of cottonwood saplings required were planted. In 2012 at 4 mitigation locations. Monitoring activities began in 2012, and were conducted annually through 2017. Due to lower success rates found during the 2013 monitoring, it was first thought that replacement trees might be necessary. Based on monitoring through 2017, however, they were not required since the original trees continued to thrive. Mitigation success was achieved.	High	2018