OPERATION AND MAINTENANCE

KEY TO ABBREVIATIONS:
N = NAVIGATION
FRM = FLOOD RISK MANAGEMENT
RC = RECREATION
H = HYDROPOWER
EN = ENVIRONMENT
WS = WATER SUPPLY
HMTF = HARBOR MAINTENANCE TRUST FUND

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OPERATION AND MAINTENANCE

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1/ This activity receives funding from both the Operation and Maintenance account and the Harbor Maintenance Trust Fund.

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ALABAMA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Alabama River Lakes, AL

AUTHORIZATION: River and Harbor Act of 1945

LOCATION AND DESCRIPTION: This multiple-purpose project is part of the Alabama-Coosa-Tallapoosa (ACT) River System and includes a 9-foot by 200-foot low use, inland navigation channel that extends from the mouth of the Alabama River, 45 miles north of Mobile, Alabama for 300 miles northeast to Montgomery, AL where it connects with the Coosa River. The Coosa River extends northeast another 286 miles to a point near Rome, Georgia. This project includes funding for three projects located on the Alabama River: Claiborne, Millers Ferry and Robert F. Henry Locks and Dams. Millers Ferry and Robert F. Henry both include hydropower.

FISCAL YEAR 2018 ALLOCATION: $16,080,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities included updates to the Weiss and Logan Martin water control manual appendices and installation of switchgear at Miller's Ferry. Sustainability activities included replacement of outdoor lighting at Claiborne and purchase and installation of a standard meter to measure electrical energy at a facility.

FISCAL YEAR 2019 ALLOCATION: $16,950,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work including dam safety formal report, tainter gate mechanical system rehabilitation, replacement of failing septic system, and cost savings measures to install standard electric meters.

BUDGETED AMOUNT FOR FY 2020: M: $7,494,000 **O:** $6,396,000 **T:** $13,890,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,106,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Dam Safety formal annual report ($31,000). There is a total of $60,000 cost savings measures to replace outdoor lighting with LED lights.

FRM: N/A

RC: $3,013,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an operational conditional assessment ($25,000).

H: $7,756,000 – Funds will be used for commonly performed O&M work.

EN: $1,001,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary monumentation and rectification ($175,000).

WS: N/A

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,014,000 shared between business lines as follows: HYD - 45%, NAV - 22%, FRM - 18%, and REC - 15%. Funds will be used for commonly performed O&M work. Two hydropower plants are on the project with a total hydropower capacity of 172,000 kilowatts.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,555,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Black Warrior and Tombigbee (BWT) Rivers, AL

AUTHORIZATION: The project was authorized by various River and Harbor Acts, 1884-1986. Replacement of obsolete structures was authorized by the 1909 River and Harbor Act.

LOCATION AND DESCRIPTION: The high use, inland navigation project includes a 9 foot by 200 foot channel from Mobile Harbor, north for 426 miles, connecting the Port of Mobile with the industrial areas of Birmingham, Alabama, and serving as the corridor from the Tennessee-Tombigbee Waterway to the Gulf of Mexico and includes six locks, dams and reservoirs.

FISCAL YEAR 2018 ALLOCATION: $26,929,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities includes Historical Properties Plan, installation of Holt Lock Gates, maintenance at recreation areas, and geospatial land data migration work.

FISCAL YEAR 2019 ALLOCATION: $25,902,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including maintenance dredging, placement area maintenance, rehabilitate failing shower house, dam safety periodic assessment, operations condition assessment, and replace Coffeeville lock motor control centers.

BUDGETED AMOUNT FOR FY 2020: M: $15,199,000 **O:** $10,754,000 **T:** $25,953,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $21,866,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging ($3,911,000), placement area maintenance ($565,000), dewatering and inspections of locks ($2,700,000), operations condition assessment ($50,000) , formal Dam Safety inspections ($517,000). There is a total of $30,000 in cost savings measures to replace outdoor lights with LED lights.

FRM: N/A

RC: $3,216,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including operation condition assessment ($25,000).

H: N/A

EN: $871,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This waterway is extremely important for the shipment of coal as an export and to support several coal-fired electric generating plants in the southeastern United States. The waterway also provides critical transportation of crude oil to an oil refinery and transportation of ore and steel for foundries.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $290,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Gulf Intracoastal Waterway (GIWW), AL

AUTHORIZATION: Authorized House Document 670, 61st Congress, 2nd Session, Rivers and Harbors Committee, 1910, as last amended by P.L. 89-790, River and Harbor Act of 1966.

LOCATION AND DESCRIPTION: The Mobile District's portion of the GIWW extends from the Louisiana and Mississippi state line to Apalachee Bay, Florida, providing a 12 foot by 150-foot channel from Louisiana to Mobile Bay, Alabama and a 12 foot by 125-foot channel from Mobile Bay to Apalachee Bay, Florida. It is a high use, coastal waterway project.

FISCAL YEAR 2018 ALLOCATION: $6,469,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $7,687,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance dredging, placement area maintenance, snag removal, levee drainage structure replacements and dredge material management plan study.

BUDGETED AMOUNT FOR FY 2020: M: $ 4,654,633 **O:** $635,000 **T:** $5,289,633 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $5,289,633 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance dredging ($3,170,000), snag removal ($550,000) and levee drainage structure replacements ($995,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Eglin, Hurlburt and Tyndall Air Force Bases receive all of their jet fuel by way of this waterway. Additionally, all of the fuel terminals and coal-fired power plants along the Gulf Coast receive their shipments by barge through this waterway. The project supports major barge traffic providing the east/west transit route along the northern Gulf Coast for coal, petroleum products, chemicals, wood products and heavy industrial components.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $533,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tennessee-Tombigbee Waterway - Wildlife Mitigation, AL and MS

AUTHORIZATION: Water Resources Development Acts of 1986 and 1992

LOCATION AND DESCRIPTION: The high use, inland navigation project extends from Demopolis, Alabama to the Tennessee River at the common boundary of Alabama, Mississippi and Tennessee. The project consists of three major components: (1) acquisition and management of 88,000 acres of separable mitigation lands at specific locations in Alabama and Mississippi; (2) management of an additional 93,000 acres of existing Corps lands at specific locations in Alabama and Mississippi; and (3) implementation of an initial development program on 181,000 acres of lands comprising the mitigation program. Most of the mitigation lands are organized into contiguous management units distributed between 10 wildlife management areas (seven in Mississippi and three in Alabama). The State wildlife management agencies are responsible for the management of all but 50,000 acres that are managed by the Corps.

FISCAL YEAR 2018 ALLOCATION: $1,733,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,782,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $1,800,000 **T:** $1,800,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,800,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Funding will support oversight and management by state wildlife agencies in Mississippi and Alabama for a total of 10 Wildlife Management Areas (WMAs) – seven WMAs in the state of Mississippi and three WMAs in the state of Alabama, as mandated by the Water Resources Development Act of 1986. These WMAs promote long-term public access, use, conservation and management of natural resources, particularly wildlife, consistent with the Corps mission mandate for natural resources management.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $15,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tennessee-Tombigbee Waterway (TTWW), AL and MS

AUTHORIZATION: River and Harbor Act of 1946

LOCATION AND DESCRIPTION: The high use, inland navigation project extends from Demopolis, Alabama to the Tennessee River at the common boundary of Alabama, Mississippi and Tennessee. The project includes a 234-mile navigation channel varying from 9-12 feet by 300 feet, 10 locks and dams, and numerous recreation areas.

FISCAL YEAR 2018 ALLOCATION: $29,729,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operations and maintenance (O&M). Non-routine work includes Geospatial Land Data Migration, and replacing wood stair-stepped retaining walls at Piney Grove Campground.

FISCAL YEAR 2019 ALLOCATION: $27,716,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dredging, placement are maintenance, dam safety inspection reports, disposal are evaluation, dewatering of Whitten lock and cost savings measures work to install electric meters.

BUDGETED AMOUNT FOR FY 2020: M: $19,872,000 **O:** $17,517,000 **T:** $37,389,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $31,797,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging ($3,124,000), dam safety inspections ($536,000), dewatering, inspection and repair of Heflin Lock ($1,300,000), temporary office space lease ($300,000) and replacement of project office ($9,000,000).

FRM: N/A

RC: $4,023,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $1,569,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Master Plan compliance ($600,000).

WS: N/A

OTHER INFORMATION: The project includes seven Class A campgrounds, three visitor centers, one historical landmark, forty boat ramps, nine large public-use areas, 72,500 acres of project wildlife mitigation land, two office buildings and ten locks and dams.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $433,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Walter F. George Lock and Dam, AL and GA

AUTHORIZATION: Rivers and Harbors Act of 1945, as last amended by Water Resources Development Act of 1986 (P.L. 99-662)

LOCATION AND DESCRIPTION: The multiple-purpose project is located at mile 75.2 on the Chattahoochee River, 1.5 miles north of Ft. Gaines, Georgia, in Clay, Quitman, and Stewart Counties, Georgia and Henry, Barbour, and Russell Counties, Alabama. The project includes a hydroelectric powerhouse, 22 recreation areas, a navigation lock and a 46,000-acre reservoir with 640 miles of shoreline.

FISCAL YEAR 2018 ALLOCATION: $9,261,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work includes completing the Master Plan update and geospatial land data mapping.

FISCAL YEAR 2019 ALLOCATION: $8,838,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M.

BUDGETED AMOUNT FOR FY 2020: M: $3,816,000 **O:** $5,283,000 **T:** $9,099,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $413,000 – Funds will be used for commonly performed O&M work. Fund will also be used for specific work activities including repair of potable water system ($18,000).

FRM: N/A

RC: $2,331,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including environmental compliance ($20,000).

H: $3,722,000 – Funds will be used for commonly performed O&M work.

EN: $1,163,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,470,000 shared between business lines as follows: HYD - 54% and NAV - 46%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a dam safety periodic inspection ($202,000). The project has a hydropower capacity of 160,000 kilowatts.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,647,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

ALASKA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Chena River Lakes Flood Control Project, North Pole, AK

AUTHORIZATION: Flood Control Act of 1968, House Document 148, 90th Congress, 2nd Session.

LOCATION AND DESCRIPTION: The Chena River Lakes Flood Control Project is located in North Pole, Alaska approximately 17 miles east of Fairbanks, Alaska. The 20,000 acre project consists of a 7.5 mile long rock-filled dam that provides flood protection to Fairbanks and adjacent areas, including Fort Wainwright, from recurring flood damage from the Chena River.

FISCAL YEAR 2018 ALLOCATION: $7,958,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $6,230,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds will be used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,731,000 **O:** $5,505,000 **T:** $7,236,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $6,760,000 – Funds will be used for commonly performed (O&M) work. Funds will also be used for specific work activities including relocation of the debris baling area/construction of a baling deck ($1,800,000).

REC: $286,000 – Funds will be used for commonly performed O&M work.

EN: $190,000 – Funds will be used for commonly performed O&M work.

H: N/A

WS: N/A

OTHER INFORMATION: Operation of the dam at the minimum level of service prevents downstream flooding on average about once each year with average annual damages prevented of $9,231,000.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $394,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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ARIZONA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Alamo Lake, AZ

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located 25 miles north of the city of Wenden and 120 miles northwest of the city of Phoenix. It consists of an earthen-fill dam, outlet works, spillway, service roads, reservoir, and recreation area.

FISCAL YEAR 2018 ALLOCATION: $2,007,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $4,009,000

DESCRIPTIONS OF WORK FOR FY 2019: FY 2019 funds are being used for routine operation and maintenance (O&M). Funds will also be used for specific work activities including repairs to the bulkhead and upper conduit; modification to a control weir to adjust height; rehabilitation/replacement of hydraulic system including flushing; interim risk reduction measures; initiation of a partnership to inspect and restore 30 acres of degraded habitat area; removal of non-native/invasive species; and to complete a repair to the Alamo Dam bulkhead gate sill.

BUDGETED AMOUNT FOR FY 2020: M: $1,245,000 **O:** $1,660,000 **T:** $2,905,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,545,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic assessment ($260,000) and the final phase of the update to water control manual ($250,000).

RC: $75,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $285,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $127,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Painted Rock Dam, AZ

AUTHORIZATION: Flood Control Act of 1950

LOCATION AND DESCRIPTION: The project is 20 miles northwest of the city of Gila Bend and 120 miles southwest of the city of Phoenix. The project consists of an earthen-fill dam, a saddle dike, outlet works, a spillway, a pilot channel reservoir, and a recreation area. The recreation area has been closed by the State of Arizona due to contaminated water.

FISCAL YEAR 2018 ALLOCATION: $1,128,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including upgrades for LED lighting.

FISCAL YEAR 2019 ALLOCATION: $3,055,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also be used for specific work activities including bridge inspections; repair and rehabilitation of infrastructure and major components; analysis of the outlet channel rock slope; and long-term planning for management of natural resources.

BUDGETED AMOUNT FOR FY 2020: M: $500,000 **O:** $665,000 **T:** $1,165,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,050,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a hydraulic steel structure inspection ($70,000), and a bridge inspection ($50,000).

RC: $25,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $90,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The quantity of water released into the downstream, unimproved channel is based on the amount of water in storage and the amount of damage occurring downstream.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $189,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Whitlow Ranch Dam, AZ

AUTHORIZATION: Flood Control Act of 1946

LOCATION AND DESCRIPTION: Whitlow Ranch Dam is located 50 miles southeast of the city of Phoenix in the County of Pima. It consists of an earthen-fill dam, outlet works, service roads, and a reservoir.

FISCAL YEAR 2018 ALLOCATION: $776,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including a periodic assessment, a periodic inspection, and boundary monumentation.

FISCAL YEAR 2019 ALLOCATION: $926,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including paving and preparation of an Operations Management Plan.

BUDGETED AMOUNT FOR FY 2020: M: $322,000 **O:** $237,000 **T:** $559,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $464,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $95,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Since construction of the Dam in 1960, Phoenix and the surrounding area have experienced a major population increase, with development pushing further into the desert nearing the un-gated flood control structure.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $58,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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ARKANSAS

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Beaver Lake, AR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-685) and the Water Supply Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: The project is located east of Rogers, Arkansas in Benton, Carroll, Madison, and Washington Counties. Beaver Lake is a multiple-purpose project located in the White River Basin. The project contains two 56 MW hydropower generator units.

FISCAL YEAR 2018 ALLOCATION: $9,073,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to update the Beaver Lake Shoreline Management Plan, replace the power plant sewage system, replace power house lighting fixtures, and conduct a sedimentation resurvey.

FISCAL YEAR 2019 ALLOCATION: $9,553,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for scheduled O&M work. Funds are also being used for specific work activities including to replace handrails on tainter gate landings and conduct a power review.

BUDGETED AMOUNT FOR FY 2020: M: $3,918,000 **O:** $7,181,000 **T:** $11,099,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,844,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replace trunnion access ladders ($120,000), and investigate operability during flood operations ($796,000).

RC: $2,800,000 – Funds will be used for commonly performed O&M work.

H: $2,268,000 – Funds will be used for commonly performed O&M work.

EN: $3,272,000 – Funds will used for commonly performed O&M work. Funds will also be used for specific work activities including acquisition of land for lake operations ($1,744,000).

WS: $25,000 – Funds will used for commonly performed O&M work.

OTHER INFORMATION: Beaver Lake is estimated to have prevented $120 million in flood damages since its construction. Hydropower generation in FY 2018 was 137,000 megawatt-hours, serving 13,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $890,000 shared between business lines as follows: HYD – 68%, FRM – 23%, and ENS – 9%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $560,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Blakely Mountain Dam, Lake Ouachita, AR

AUTHORIZATION: Flood Control Act of 1944, Section 10

LOCATION AND DESCRIPTION: Blakely Mountain Dam, Lake Ouachita is located on the Ouachita River in Garland and Montgomery Counties, AR, west of Hot Springs, AR. The project consists of an earth-fill dam, power plant and lake for hydropower generation, flood control, recreation, water supply, and natural resources management. Storage capacity of the lake is 2,768,000 acre-feet. The power plant has a generating capacity of 75,000 kilowatts. Twenty campgrounds and recreation areas are located on the project.

FISCAL YEAR 2018 ALLOCATION: $7,716,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $9,325,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including plans and specs to upgrade station service heating and coaling transformers, hydraulic steel of hydropower components and management of water supply agreements.

BUDGETED AMOUNT FOR FY 2020: M: $904,000 **O:** $6,954,000 **T:** $7,858,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $766,000 - Funds will be used for commonly performed O&M work.

RC: $2,737,000 – Funds will be used for commonly performed O&M work.

H: $3,837,000- Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including providing funds for plans & specifications; and supporting the identification, aggregation, and visualization of the routine operational data that is being collected from individual hydropower units and plants and stored locally at the project site ($90,000).

EN: $143,000 - Funds will be used for commonly performed O&M work.

WS: $30,000 - Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Blakely Mountain Dam has prevented over $23 million in flood damages since it was placed in operation in 1952. In FY 2018, Blakely Mountain Power Plant generated 146,787 megawatt-hours of hydroelectric power and since being placed in operation, has produced gross revenues of over $751.0 million. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $345,000 shared between business lines as follows: HYD – 51% and FRM – 49%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dam safety, periodic inspections, and hydraulic steel structures inspections.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Blue Mountain Lake, AR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-685)

LOCATION AND DESCRIPTION: The project is near Waveland, Arkansas in Logan and Yell Counties. Blue Mountain Lake is located in the Arkansas River Basin on the Petit Jean River. The primary purpose of the project is flood risk management. The project also offers excellent recreational opportunities.

FISCAL YEAR 2018 ALLOCATION: $1,864,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,851,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing security gates.

BUDGETED AMOUNT FOR FY 2020: M: $221,000 **O:** $1,541,000 **T:** $1,762,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,089,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection ($8,000) and stilling basin inspection before periodic assessment ($59,000).

RC: $456,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $207,000 – Funds will be used for commonly performed O&M work.

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Blue Mountain Lake is estimated to have prevented $57 million in flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $72,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bull Shoals Lake, AR

AUTHORIZATION: Flood Control Act of 1938 (P.L 75-685)

LOCATION AND DESCRIPTION: Bull Shoals Lake is located in Marion, Baxter, and Boone Counties of Arkansas and Ozark and Taney Counties of Missouri. Bull Shoals is a multi-purpose project with authorized purposes for hydropower and flood risk management. The project contains eight hydropower generating units with a total installed capacity of 340 megawatts.

FISCAL YEAR 2018 ALLOCATION: $11,313,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including to repair Conduit No. 2 (Monolith 21) and service sluice gates, rehabilitate main unit sump pump, and replace worn security fencing and lighting.

FISCAL YEAR 2019 ALLOCATION: $7,683,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including an arc flash analysis.

BUDGETED AMOUNT FOR FY 2020: M: $1,710,000 **O:** $5,756,000 **T:** $7,466,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,042,000 – Funds will be used for commonly performed O&M work.

RC: $1,695,000 – Funds will be used for commonly performed O&M work.

H: $3,449,000 – Funds will be used for commonly performed O&M work

EN: $423,000 – Funds will be used for commonly performed O&M work.

WS: $13,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Bull Shoals Lake is estimated to have prevented $342 million in cumulative flood damages since its construction. Hydropower generation in FY 2018 was 652,000 megawatt-hours, enough for 61,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $844,000 shared between business lines as follows: HYD – 49% and FRM – 51%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $370,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: DeGray Lake, AR

AUTHORIZATION: Rivers and Harbors Act of 1950, Section 101 and Water Supply Act of 1958, as amended by Federal Water Pollution Control Act of 1961.

LOCATION AND DESCRIPTION: DeGray Lake is located on the Caddo River in Clark and Hot Spring counties, AR, northwest of Arkadelphia, AR. The project consists of an earth-fill dam, power plant and lake for hydropower generation, flood control, recreation, water supply, and natural resources management.

FISCAL YEAR 2018 ALLOCATION: $7,003,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M), to complete the project's master plan update, and hydropower repairs.

FISCAL YEAR 2019 ALLOCATION: $7,980,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including removal of vegetation from dam and structures, paving channel roads and placement of expansion joints.

BUDGETED AMOUNT FOR FY 2020: M: $1,602,000 **O:** $5,546,000 **T:** $7,148,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,273,000 – Funds will be used for commonly performed O&M work.

RC: $2,717,000 – Funds will be used for commonly performed O&M work.

H: $2,306,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including providing funding for plans & specifications for Lighting Arrestors and Surge Capacitors Upgrade/Replacement ($45,000).

EN: $532,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The power plant has a generating capacity of 78,000 kilowatts. Since being placed in operation, the DeGray power plant has produced gross revenues of over $498 million. There is a re-regulating pool below the main dam for water supply storage and pumped-storage power generation. Storage capacity of the lake is 495,100 acre-feet. DeGray Dam has prevented $9 million in flood damages since it was placed in operation. Eighteen campgrounds and recreation areas are located on the project. Annual public visitation to the project is approximately 3,000,000. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $320,000 shared between business lines as follows: REC-33%, FRM-27%, EN-24%, HYD-13%, and NAV-3%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: DeQueen Lake, AR

AUTHORIZATION: Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: DeQueen Lake is located on the Rolling Fork River, in Sevier County, four miles northwest of DeQueen, Arkansas. The project's authorized purposes are flood risk management, water supply, recreation, and environmental stewardship.

FISCAL YEAR 2018 ALLOCATION: $1,691,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $1,555,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including to update the water control manual.

BUDGETED AMOUNT FOR FY 2020: M: $432,000 **O:** $1,147,000 **T:** $1,579,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $956,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to conduct a table top emergency exercise ($14,000).

RC: $425,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $188,000 – Funds will be used for commonly performed O&M work.

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: DeQueen Lake is estimated to have prevented $24 million in cumulative flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $37,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Dierks Lake, AR

AUTHORIZATION: Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: Dierks Lake is located in Dierks, Arkansas, on the Saline River in Howard and Sevier Counties. The project's authorized purposes are flood risk management, water supply, recreation, and environmental stewardship.

FISCAL YEAR 2018 ALLOCATION: $1,760,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to install a manhole for access to the toe drain.

FISCAL YEAR 2019 ALLOCATION: $1,491,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including to update the water control manual and to resurface roads in Jefferson Ridge Park.

BUDGETED AMOUNT FOR FY 2020: M: $300,000 **O:** $1,110,000 **T:** $1,410,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $873,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to conduct a dam safety table top emergency exercise ($14,000).

RC: $476,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $51,000 – Funds will be used for commonly performed O&M work.

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Dierks Lake is estimated to have prevented $15 million in cumulative flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Gillham Lake, AR

AUTHORIZATION: Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: Gillham Lake is in Howard County six miles northeast of Gillham, Arkansas and located on the Cossatot River. The project's primary purposes are flood risk management, water supply, recreation, and environmental stewardship.

FISCAL YEAR 2018 ALLOCATION: $1,512,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $1,392,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including to update the water control manual.

BUDGETED AMOUNT FOR FY 2020: M: $1,553,000 **O:** $992,000 **T:** $2,545,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,007,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repair emergency and service slide gates ($1,195,000), conduct dam safety tabletop emergency exercises ($14,000), and clean and reseal the control tower bridge deck ($21,000).

RC: $383,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $143,000 – Funds will be used for commonly performed O&M work.

WS: $12,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Gillham Lake is estimated to have prevented $35 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $23,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Greers Ferry Lake, AR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-685) as amended by the Flood Control Acts of 1941 (P.L. 77-228) and 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: Greers Ferry Lake is located near Heber Springs, Arkansas, on the Little Red River in Cleburne and Van Buren Counties. Greers Ferry is one of the five multi-purpose projects in the White River Basin and was authorized for hydropower and flood risk management. The project contains two 48-megawatt hydropower generators.

FISCAL YEAR 2018 ALLOCATION: $8,086,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including to complete the Greers Ferry Lake Master Plan, update the arc flash analysis, and conduct a power review.

FISCAL YEAR 2019 ALLOCATION: $7,762,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including to repair the training wall, connect Choctaw dump station to the sewer field, and install water valves in various locations in all parks.

BUDGETED AMOUNT FOR FY 2020: M: $1,843,000 **O:** $7,200,000 **T:** $9,043,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $869,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to re-seal expansion joints and to spot repair a road ($275,000).

RC: $3,303,000 – Funds will be used for commonly performed O&M work.

H: $2,255,000 – Funds will be used for commonly performed O&M work.

EN: $1,654,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including revising the Greers Ferry Lake Shoreline Management Plan ($650,000).

WS: $28,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Greers Ferry Lake is estimated to have prevented $55 million in cumulative flood damages since its construction. Hydropower generation in FY 2018 was 144,000 megawatt-hours, enough for 13,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $934,000 shared between business lines as follows: HYD – 59% and FRM – 41%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $369,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: McClellan-Kerr Arkansas River Navigation System, AR

AUTHORIZATION: River and Harbor Act of 1946 (P.L 79-525)

LOCATION AND DESCRIPTION: The 445-mile long McClellan-Kerr Arkansas River Navigation System (MKARNS) is a moderate-use waterway consisting of 18 locks and dams (including Ozark-Jeta Taylor and Dardanelle), providing a nine-foot deep inland navigation channel from the Mississippi River to Catoosa, Oklahoma. The system includes the Arkansas, White, and Verdigris Rivers. The authorized purposes include navigation, environmental stewardship, and recreation.

FISCAL YEAR 2018 ALLOCATION: $48,592,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including channel dredging (MKARNS, Ozark-Jeta Taylor, and Dardanelle); replacing external lighting, windows, and water heaters at Pine Bluff Marine Terminal; repair stoplog centerpost receivers at Murray Lock and Dam (L&D); rehabilitate shore power at Norrell, Mills, and Hardin L&D; repair and paint tainter gates at Mills and Ozark LD; rehabilitate shore power at Sanders, Maynard, and Terry L&D; repair Toad Suck Bridge; and replace hydraulic and air piping at Locks 3 - 6.

FISCAL YEAR 2019 ALLOCATION: $50,485,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including channel dredging for MKARNS, Dardanelle and Ozark; repairing the pintle base at Dardanelle; repairing the stoplog centerpost receivers and inspect miter gates at Trimble and Murray L&D; install stoplog slots in upstream lock walls at Dardanelle; and conduct a power review at Ozark.

BUDGETED AMOUNT FOR FY 2020: M: $22,388,000 **O:** $30,087,000 **T:** $52,475,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $36,177,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities, including channel dredging for MKARNS ($2,043,000), periodic and stilling basin inspections and assessments ($329,000), acquisition and administration of hyacinth control in Pool 2 and Arkansas Post Canal of the MKARNS ($190,000), repair stoplog centerpost receivers and inspect miter gates at Ormond Lock #9 ($3,000,000), rehabilitate and paint tainter gates at Wilbur D. Mills Dam (Package 1 of 4) ($4,400,000), prepare Rehabilitation Evaluation Report (RER) for Terry Lock & Dam - Phase 1 ($1,000,000), and repair scour area immediately downstream of Lock 1 approach apron ($899,000).

FRM: N/A

RC: $6,991,000 – Funds will be used for commonly performed O&M work.

H: $5,938,000 – Funds will be used for commonly performed O&M work.

EN: $1,441,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities, including conduct a survey of boundary line to verify establishment of survey monuments ($70,000).

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The McClellan-Kerr Arkansas River Navigation System is estimated to have prevented $2,5 billion in cumulative flood damages since its construction. Hydropower generation in FY 2018 was 672,000 megawatt-hours, enough for 63,000 homes. As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $1,918,000 shared between business lines as follows: HYD – 53% and NAV – 47% at Dardanelle and REC – 63%, HYD – 18%, NAV – 16%, and EN – 3% at Ozark. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,709,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Millwood Lake, AR

AUTHORIZATION: Flood Control Act of 1946 (P.L. 79-526) as modified by the Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: Millwood Lake is seven miles east of Ashdown, Arkansas, and located on the Little River. The lake was constructed for the primary purpose of flood risk management, and authorized for water supply, recreation, and environmental stewardship.

FISCAL YEAR 2018 ALLOCATION: $8,888,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including to repair slope slides on main dam embankment (Phase II and Phase III), repair stilling basin floor (Phase I), and continue emergency repairs to Okay Levee.

FISCAL YEAR 2019 ALLOCATION: $4,492,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including to update the water control manual, repair the stilling basin, replacing boat lane pole markers in the river channel, resurfacing roadways to River Run East and West Parks, installing a new septic system for Cottonshed Campground, and replacing the current ventilation in Beard's Bluff, White Cliffs, and Cottonshed Park shower facilities.

BUDGETED AMOUNT FOR FY 2020: M: $845,000 **O:** $2,400,000 **T:** $3,245,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,656,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including conduct tabletop emergency exercises ($18,000), replace/repair pool gauges ($85,000), and replace limit switches in hoist houses ($110,000).

RC: $762,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $802,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including updates to the Millwood Lake Master Plan/Shoreline Management Plan ($600,000).

WS: $25,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Millwood Lake is estimated to have prevented $35 million in cumulative flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $324,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Narrows Dam, Lake Greeson, AR

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: Narrows Dam and Lake Greeson is located on the Little Missouri River in Pike County, AR, north of Murfreesboro, AR. The project consists of a concrete dam, power plant and lake for hydropower generation, flood control, recreation, water supply, and natural resources management. Storage capacity of the lake is 407,000 acre-feet. The power plant has a generating capacity of 25,500 kilowatts. There are 16 campgrounds and recreation areas on the project.

FISCAL YEAR 2018 ALLOCATION: $5,849,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $6,048,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of potable water supply, inspections and plans and specifications for hydropower upgrades.

BUDGETED AMOUNT FOR FY 2020: M: $1,216,000 **O:** $4,516,000 **T:** $5,732,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

NAV: N/A

FRM: $1,399,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including providing funding to replace lighting in the inspection gallery of the dam (replace electrical conduit and install new wiring and fixtures) ($25,000).

RC: $1,789,000 – Funds will be used for commonly performed O&M work.

H: $1,972,000 – Funds will be used for commonly performed O&M work.

EN: $289,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Narrows Dam has prevented over $9 million in flood damages since it was placed in operation in 1950. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $283,000 shared between business lines as follows: HYD – 22% and FRM – 78%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Nimrod Lake, AR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-685)

LOCATION AND DESCRIPTION: Nimrod Lake is located on the Fourche LaFave River, nine miles southeast of Plainview, Arkansas, in Yell and Perry Counties. There are 680-square miles of drainage area above the dam. The authorized purpose of the project is flood risk management. The project also offers excellent recreational opportunities.

FISCAL YEAR 2018 ALLOCATION: $2,047,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $2,371,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including to install security monitoring systems and replace security gates.

BUDGETED AMOUNT FOR FY 2020: M: $306,000 **O:** $1,703,000 **T:** $2,009,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,199,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to conduct a periodic bridge inspection ($1,000) and conduct a stilling basin inspection ($59,000).

RC: $507,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $293,000 – Funds will be used for commonly performed O&M work.

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Nimrod Lake is estimated to have prevented $49 million in cumulative flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $38,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Norfork Lake, AR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-685)

LOCATION AND DESCRIPTION: Norfork Lake is located in Baxter County, Arkansas, and Ozark County, Missouri. Norfork Lake is one of the five multiple-purpose projects on the White River Basin constructed for flood risk management and hydropower. The project contains two 40.25-megawatt hydropower generators.

FISCAL YEAR 2018 ALLOCATION: $9,430,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also being used for specific work activities including to rehabilitate station sump system, rehabilitate sluice gates, repair the base of the ogee, repair spalls and falling debris hazard along the dam face (Phase I – Design), and replace roadway median hatch covers.

FISCAL YEAR 2019 ALLOCATION: $7,173,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including to replace roadway median hatch covers and repair bridge bearings.

BUDGETED AMOUNT FOR FY 2020: M: $2,515,000 **O:** $4,827,000 **T:** $7,342,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,620,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repair bridge bearings ($750,000).

RC: $1,167,000 – Funds will be used for commonly performed O&M work.

H: $2,727,000 – Funds will be used for commonly performed O&M work.

EN: $867,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including continue Norfork Lake Master Plan revisions ($600,000).

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Norfork Lake is estimated to have prevented $103 million in cumulative flood damages since its construction. Hydropower generation in FY 2018 was 167,000 megawatt-hours, enough for 16,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $951,000 shared between business lines as follows: HYD – 36% and FRM – 64%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,735,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ouachita and Black Rivers, AR and LA

AUTHORIZATION: Rivers and Harbors Act of 1950, as modified by Rivers and Harbors Act of 1960

LOCATION AND DESCRIPTION: The project for navigation on the Ouachita/Black Rivers extends 366 miles from the mouth of the Black River to Camden, AR and provides for a 9-foot by 100-foot navigation channel. The project also includes a diversion channel through Catahoula Lake near Jonesville, LA for ecological purposes. This is a low use waterway.

FISCAL YEAR 2018 ALLOCATION: $18,488,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) and dredging.

FISCAL YEAR 2019 ALLOCATION: $8,149,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used to for specific work activities including periodic surveys and a water control manual update.

BUDGETED AMOUNT FOR FY 2020: M: $1,828,000 **O:** $5,511,000 **T:** $7,339,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $5,634,000 – Funds will be used for commonly performed O&M work.
.
FRM: $215,000 – Funds will be used for commonly performed O&M work.

RC: $1,392,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including removal of silt accumulation due to flooding that cannot be predicted. ($40,000).

H: N/A

EN: $98,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $315,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: White River, AR

AUTHORIZATION: The Rivers and Harbors Acts of 1892 and 1960; Office of the Chief of Engineers modified the project authority in 1968.

LOCATION AND DESCRIPTION: This project is located on the White River from mile 9.8 to mile 255, near Newport in Jackson County. The existing authority is for 4.5 feet by 100 feet from mile 198 to 255 at 3.5 feet on the Newport gage; and 8 feet by 125 feet from mile 9.8 to 198 at 12 feet on the Clarendon gage, including a 5 feet minimum draft at low river stages. The local interest is the Arkansas Waterways Commission.

FISCAL YEAR 2018 ALLOCATION: $25,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to collect limited navigation channel surveys.

FISCAL YEAR 2019 ALLOCATION: $275,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M). Funds are also being used for specific work activities, including dredging.

BUDGETED AMOUNT FOR FY 2020: M: $25,000 **O:** $0 **T:** $25,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $25,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Five-year average commercial tonnage is one thousand tons.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Black Butte Lake, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located on Stony Creek, a tributary of the Sacramento River, about nine miles west of the town of Orland, CA in the Counties of Glenn and Tehama. The project consists of an earthen-fill dam, six dikes, spillway, and reservoir.

FISCAL YEAR 2018 ALLOCATION: $3,076,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and specific work activities including an arc flash hazard analysis, installation of solar panels, and restroom upgrades.

FISCAL YEAR 2019 ALLOCATION: $2,594,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including an arc flash hazard analysis.

BUDGETED AMOUNT FOR FY 2020: M: $5,651,000 **O:** $2,399,000 **T:** $8,050,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $6,821,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a Hydraulic Steel Structure Inspection ($60,000) and replacement of headquarters building ($5,000,000).

RC: $947,000 – Funds will be used for commonly performed O&M work. Funds will also be used to rehabilitate restrooms ($90,000).

H: N/A

EN: $252,000 – Funds will be used for commonly performed O&M work

WS: $30,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The Black Butte Lake Archeological District is comprised of 52 sites eligible for inclusion in the National Register of Historic Places.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $226,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is estimated to be: $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Buchanan Dam – H.V. Eastman Lake, CA

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: The project is on the Chowchilla River 16 miles northeast of the City of Chowchilla, CA in the Counties of Madera and Mariposa. The project consists of an earthen-fill dam and reservoir for flood control, irrigation, and recreation. The project also includes two miles of channel improvement work and levee construction on Ash and Berenda Sloughs, two tributary channels of the river.

FISCAL YEAR 2018 ALLOCATION: $2,410,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and specific work activities including purchase and installation of 400 solar panel ground mounted systems and 2 electric charging stations.

FISCAL YEAR 2019 ALLOCATION: $2,083,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including geospatial land data migration and boundary monumentation.

BUDGETED AMOUNT FOR FY 2020: M: $2,834,000 **O:** $2,143,000 **T:** $4,977,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $4,038,000 – Funds will be used for commonly performed O&M. Funds will also be used for specific work activities including arc flash hazard analysis ($200,000), access road rockslide repair ($2,300,000), and a dam safety inspection and assessment report ($46,000).

RC: $728,000 – Funds will be used for commonly performed O&M.

H: N/A

EN: $181,000 – Funds will be used for commonly performed O&M.

WS: $30,000 – Funds will be used for commonly performed O&M.

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $29,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Coyote Valley Dam, Lake Mendocino, CA

AUTHORIZATION: Flood Control Act of 1950, Water Resources Development Act of 1974

LOCATION AND DESCRIPTION: Lake Mendocino, also known as Coyote Valley Dam, is on the Russian River five miles northeast of the city of Ukiah in the County of Mendocino. The dam is an earthen-fill structure with a reservoir. The Coyote Valley Dam project was completed in 1959 for flood control, water supply, recreation, and stream-flow regulation. Authorization for environmental mitigation was added in 1974.

FISCAL YEAR 2018 ALLOCATION: $3,803,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and specific work activities including trail repairs.

FISCAL YEAR 2019 ALLOCATION: $3,505,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,145,000 **O:** $2,559,000 **T:** $3,704,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,207,000 – Funds will be used for commonly performed O&M work.

RC: $1,417,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $40,000 – Funds will be used for commonly performed O&M work.

WS: $40,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The fish imprinting facility at this project is operated in conjunction with the fish hatchery at Warm Springs Dam (Dry Creek project). The Warm Springs Hatchery supports the last stock of the California Central Coast Coho. If this stock was to perish the subspecies would become extinct.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,297,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Dry Creek (Warm Springs) Lake and Channel, CA

AUTHORIZATION: River and Harbor Act of 1962, Title II; Water Resources Development Act of 1974

LOCATION AND DESCRIPTION: Dry Creek Lake and Channel is part of the tributary of the Russian River 75 miles north of the city of San Francisco in the County of Sonoma. It consists of an earthen- and rock-fill dam, and reservoir. The project was completed in 1983 for flood control, water supply, environmental stewardship, and recreation purposes. Authorization for mitigation was added in 1974.

FISCAL YEAR 2018 ALLOCATION: $6,405,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $7,419,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Non-routine activites budgeted include designs to repair outlet features and to modify, repair, and test bulkheads.

BUDGETED AMOUNT FOR FY 2020: M: $2,619,000 **O:** $4,197,000 **T:** $6,816,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $5,278,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an emergency water supply line repair ($1,100,000).

RC: $1,438,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $80,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary inspection and marking ($10,000).

WS: $20,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The fish hatchery supports the last stock of the California Central Coast Coho. If this stock was to perish the subspecies would become extinct. The Water Resources Reform and Development Act of 2014 provided authority to instigate a feasibility study on potential improvements to fish habitat which is scheduled to culminate in FY 2019 with a Director's Report.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,194,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Farmington Dam, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located on Littlejohn Creek three miles upstream from Farmington and 18 miles east of the city of Stockton in the Counties of San Joaquin and Stanislaus. The project consists of an earthen-fill dam, spillway, and reservoir. There are no recreation facilities.

FISCAL YEAR 2018 ALLOCATION: $491,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $473,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $132,000 **O:** $580,000 **T:** $712,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $712,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $5,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hidden Dam – Hensley Lake, CA

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: The project is located on the Fresno River 15 miles northeast of the city of Madera in the County of Madera. The project consists of an earthen-fill dam and a reservoir.

FISCAL YEAR 2018 ALLOCATION: $2,398,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M) and specific work activities including removal of tree stumps, installation of a solar generation system, and replacements of roofs on four buildings.

FISCAL YEAR 2019 ALLOCATION: $2,160,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M and specific work including gate automation activities.

BUDGETED AMOUNT FOR FY 2020: M: $341,000 **O:** $2,297,000 **T:** $2,638,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,613,000 – Funds will be used for commonly performed O&M work. Funds will be used for specific work activities including bridge inspections ($40,000), periodic assessments ($148,000), and hydraulic steel structures inspection and assessment ($60,000).

RC: $894,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $101,000 – Funds will be used for commonly performed O&M work.

WS: $30,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $316,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Isabella Lake, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is in the County of Kern 50 miles northeast of the city of Bakersfield near the confluence of the north and south forks of the Kern River. The project comprises an earthen-fill dam, an earthen-fill auxiliary dam (about one-half mile east of the main dam), a concrete spillway, and a reservoir.

FISCAL YEAR 2018 ALLOCATION: $3,808,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and specific work activities including repair of cavitation on main dam

FISCAL YEAR 2019 ALLOCATION: $1,375,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $358,000 **O:** $1,338,000 **T:** $1,696,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,461,000 – Funds will be used for commonly performed O&M. Funds will also be used for specific work activities including a Hydraulic Steel Structure Inspection ($50,000).

RC: N/A

H: N/A

EN: $205,000 – Funds will be used for commonly performed O&M. Funds will also be used for specific work activities including Boundary Monumentation and Rectification ($175,000).

WS: $30,000 – Funds will be used for commonly performed O&M.

OTHER INFORMATION: Recreation is managed by the U.S. Forest Service. The project is currently not fully able to provide the benefits for which it was designed and constructed due to seismic issues and seepage problems. A Dam Safety Modification Study was conducted and the Record of Decision (Dam Safety Modification Report (DSMR)) approved in December of 2012. The Dam Safety Modification (Construction) project is currently in progress. Production blasting has started and will continue through 2020. Work on the Old Isabella, South Fork and Auxiliary Dam recreation areas is in progress with an expected completion date of May 2019.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $45,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Los Angeles County Drainage Area, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: Project consists of the following:

a. Hansen Dam is four miles east of the City of San Fernando
b. Lopez Dam is two miles northeast of the City of San Fernando
c. Santa Fe Dam is 15 miles northeast of the City of Los Angeles
d. Sepulveda Dam is 25 miles northwest of the City of Los Angeles
e. Whittier Narrows Dam is ten miles east of the City of Los Angeles
f. Los Angeles County Drainage Area Channels consist of 517 miles of channels, of which 38 miles are maintained by the U.S. Army Corps of Engineers and the remainder by Los Angeles County Department of Public Works

Note: Recreation areas exist at all dams except Lopez.

FISCAL YEAR 2018 ALLOCATION: $19,302,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Amount includes funding for the implementation of structural and non-structural interim risk reduction measures at Whittier Narrows Dam, sediment removal (phase 1 of 6), Whittier Narrows Dam spillway gate repairs, and updates to the master plans.

FISCAL YEAR 2019 ALLOCATION: $22,407,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used commonly performed O&M work. Funds are being used for specific work activities including evaluation of 2 drain systems, updating seismicity, repair or replacement of fencing, interim risk reduction measures, updates to 5 O&M manuals, preparing Operation Management Plans for 7 project features, paving, periodic inspection of Lopez dam, implementing a pest control program, rehabilitation and repairs of infrastructure at various locations, sediment removal at 2 project features, and an update to the Master Plans.

BUDGETED AMOUNT FOR FY 2020: M: $10,685,000 **O:** $2,423,000 **T:** $13,108,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $12,038,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Bridge Inspections ($240,000), IRRM-DSAC 2 for Lopez Dam ($50,000), Levee Safety Inspections ($228,000), and Update Water Control Manual for Whittier Narrows Dam ($285,000).

RC: $310,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $760,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $244,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Merced County Streams, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located in the Counties of Merced and Mariposa. The project consists of the following flood control improvements:

a. Five flood retention dams:
   i. Mariposa, 88 feet-high (15,000 acre-feet), 18 miles east of Merced, CA.
   ii. Owens 75 feet-high (3,600 acre-feet), 16 miles east of Merced, CA.
   iii. Bear, 92 feet-high (7,700 acre-feet), 16 miles east of Merced, CA.
   iv. Burns, 53 feet-high (7,000 acre-feet), 13 miles northeast of Merced, CA.
   v. Castle, 40 feet-high (6,400 acre-feet), 6 miles northwest of Merced, CA.
b. Black Rascal and Owens Diversion Canals; and
c. Channel improvements on various streams in the vicinity of Merced, CA.

There are no recreation areas.

FISCAL YEAR 2018 ALLOCATION: $652,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $453,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $72,000 **O:** $398,000 **T:** $470,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $470,000 – Funds will be used for commonly performed O&M for flood risk management.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $112,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mojave River Dam, CA

AUTHORIZATION: Rivers and Harbors Act of 1960, Title II (PL 86-845)

LOCATION AND DESCRIPTION: The project is 100 miles east of the City of Los Angeles in the County of San Bernardino. It consists of an earthen-fill dam, service and spillway roads, outlet works, an earthen-fill saddle dike, a reservoir, and a recreation area.

FISCAL YEAR 2018 ALLOCATION: $1,292,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activity funds were used to initiate a Master Plan; initiate a periodic assessment; and to initiate a basin boundary survey.

FISCAL YEAR 2019 ALLOCATION: $2,071,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including completion of the periodic assessment, completion of the boundary survey, mapping and monitoring of cracks within the inlet; fence repair; paving roads; repair/rehabilitation of concrete inlet, preparing an Operations Management Plan; and to continue work on a Master Plan.

BUDGETED AMOUNT FOR FY 2020: M: $675,000 **O:** $654,000 **T:** $1,329,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $879,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance of Outlet Conduit / Tunnel ($300,000).

RC: $150,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $300,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $165,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: New Hogan Lake, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is 28 miles northeast of the city of Stockton in the County of Calaveras, and located on the Calaveras River. It consists of a rock-fill dam with an impervious earth core, four dikes, spillway, and reservoir.

FISCAL YEAR 2018 ALLOCATION: $2,579,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,849,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including an arc flash hazard analysis.

BUDGETED AMOUNT FOR FY 2020: M: $1,000,000 **O:** $2,583,000 **T:** $3,583,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,214,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an alignment survey ($35,000) and a hydraulic steel structure inspection ($40,000).

RC: $976,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $331,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a boundary survey ($200,000).

WS: $62,000 - Funds will be used for commonly performed O&M work.

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 to FY 2019 was $185,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: New Melones Lake (Downstream Channel), CA

AUTHORIZATION: Flood Control Act of 1944, Flood Control Act of 1962

LOCATION AND DESCRIPTION: The project is located in the Counties of Calaveras, San Joaquin, Stanislaus, and Tuolumne. The project extends along the Stanislaus River from Goodwin Dam to its confluence with the San Joaquin River. The project provides recreation access to the Lower Stanislaus River.

FISCAL YEAR 2018 ALLOCATION: $2,667,000

DESCRIPTIONS OF WORK FOR FY 2018: Funding were used for routine operation and maintenance (O&M) and for specific work activities including professional survey of easement boundaries and resurfacing asphalt at recreation area.

FISCAL YEAR 2019 ALLOCATION: $1,739,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for an arc flash hazard analysis, rekeying the parks, preserving the historic Knights Ferry bridge, and updating the historic property management plan.

BUDGETED AMOUNT FOR FY 2020: M: $706,000 **O:** $1,491,000 **T:** $2,197,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $495,000 – Funds will be used for commonly performed O&M work.

RC: $895,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $807,000 – Funds will be used for commonly performed O&M work. Funds also be used for specific work activities including boundary and flowage easment inspection and monitoring activities ($400,000).

WS: N/A

OTHER INFORMATION: New Melones Dam was constructed by the U.S. Army Corps of Engineers, but is operated and maintained by the U.S. Bureau of Reclamation as part of the Central Valley project.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $249,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is estimated to be: $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pine Flat Lake, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: Pine Flat Dam is 25 miles east of the city of Fresno in the County of Fresno and located on the Kings River. The project consists of a straight, gravity-type concrete structure, a spillway in the central section, and a reservoir.

FISCAL YEAR 2018 ALLOCATION: $10,454,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including cleaning and recoating tainter gates, sluiceway service gates, and emergency gates.

FISCAL YEAR 2019 ALLOCATION: $4,393,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including weir repairs, cleaning the vertical drains, and preparing plans and specifications for capping the intake screen.

BUDGETED AMOUNT FOR FY 2020: M: $1,203,000 **O:** $3,023,000 **T:** $4,226,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,080,000 – Funds will be used for commonly performed O&M work. Funds will also be used for an alignment survey ($16,000) and a hydraulic steel structural inspection ($80,000)

RC: $951,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $135,000 – Funds will be used for commonly performed O&M work.

WS: $60,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $729,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Sacramento River and Tributaries (Debris Control), CA 2/

AUTHORIZATION: Rivers and Harbors Act of 1935

LOCATION AND DESCRIPTION: Englebright Dam is 20 miles east of the city of Marysville in the County of Yuba on the Yuba River. North Fork Dam is 5 miles northeast of Auburn, CA in Nevada County on the American River. The thin wall concrete arch dams hold back hydraulic mining sediment and debris to prevent navigation impacts downstream. The project was originally constructed by the California Debris Commission and was transferred to the Corps in 1986. The Corps administers the recreation program at Englebright. The US Bureau of Reclamation administers recreation at North Fork Dam by outgrant to the California State Parks system.

FISCAL YEAR 2018 ALLOCATION: $954,000

DESCRIPTIONS OF WORK FOR FY 2018: Fund were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,084,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $215,000 **O:** $694,000 **T:** $909,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $656,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $253,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary monumentation and rectification for environmental stewardship ($75,000).

WS: N/A

OTHER INFORMATION: The Sacramento District was involved in litigation brought by the South Yuba River Citizens League regarding project impacts to Endangered Species Act listed species (salmon, steelhead and green sturgeon). As a result of the litigation, the Corps issued a Biological Assessment in October 2013 clarifying the discretionary activities at the dams. In May 2014, National Marine Fisheries Service issued a letter of concurrence that the proposed project is not likely to adversely affect the listed species.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $119,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into FY 2020 from prior appropriations for use on this effort is estimated to be: $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: San Francisco Bay Delta Model Structure, CA

AUTHORIZATION: Water Resources Development Act of 1974

LOCATION AND DESCRIPTION: The San Francisco Bay Delta Model Regional Visitor Center (BMVC) is located in the city of Sausalito in the County of Marin. The Class A Visitor Center has hundreds of historical exhibits and STEM (science, technology, engineering, and mathematics) related exhibits as well. The centerpiece exhibit is a historical hydraulic to scale three-dimensional model of the greater San Francisco Bay Area and Delta covering one and one half acres. Building also houses the historical significants exhibits showcasing U.S. Army Corps of Engineers (USACE) missions, the model, and the Marin Shipyard during WWII.

FISCAL YEAR 2018 ALLOCATION: $1,549,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included the initiation of the Master Plan.

FISCAL YEAR 2019 ALLOCATION: $1,179,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $122,000 **O:** $621,000 **T:** $743,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $743,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The facility receives well over 200,000 visitors (60% school children) per year to learn about USACE missions. The BMVC fulfills the USACE Strategic Communication goals by providing public and curriculum-based tours, special events, workshops, and seminars on the Corps' modern missions and water resource developments projects. It emphasizes the historical significance of the Marin Shipyard during World War II and the actual model used in USACE decision making. The Bay Model building also houses the district Emergency Operations Center. The Bay Model building is a “net zero” facility as it generates enough electirical power from solar panels to offset all power usage.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $997,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Santa Ana River Basin, CA

AUTHORIZATION: Flood Control Act of 1936

LOCATION AND DESCRIPTION: Project consists of the following:

a. Brea Dam is located two miles north of Fullerton.
b. Carbon Canyon Dam is located 16 miles northeast of Santa Ana.
c. Fullerton Dam is located two miles northeast of Fullerton.
d. Prado Dam is located 45 miles east of Los Angeles.
e. San Antonio Dam is located eight miles north of Pomona.
f. San Antonio and Chino Creeks Channels are located 30 miles east of Los Angeles and includes 16 miles of channel.

All dams except San Antonio have recreation areas.

FISCAL YEAR 2018 ALLOCATION: $5,523,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for non-routine activities including rehabilitation and/or replacement of major components at Prado Dam and updates to the master plan.

FISCAL YEAR 2019 ALLOCATION: $12,445,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M. Funds are also being used for specific work activities including repair or replacement of fencing and access gates; inspections of two sub-drain systems; updates to four O&M manuals; preparation of four operation management plans; and infrastructure rehabilitation at 4 dam sites.

BUDGETED AMOUNT FOR FY 2020: M: $2,225,000 **O:** $3,933,000 **T:** $6,158,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $5,377,000 – Funds will be used for commonly performed O&M work at 6 dams and 16 miles of levee and channel. Funds will also be used for specific work activities including hydraulic steel structure inspections for two dams ($140,000), Interim Risk Reduction Measures ($110,000), and lighting upgrades at 4 dams ($60,000).

RC: $375,000 – Funds will be used for commonly performed O&M work for recreation.

H: N/A

EN: $406,000 – Funds will be used for commonly performed O&M work for environmental stewardship.

WS: N/A

OTHER INFORMATION: There are several areas along the flood control channel and levee system that provide less than a 100-year level of protection.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $397,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2020 from prior appropriations for use on this effort is $0.

PPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Success Lake, CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located on the Tule River, six miles east of the city of Porterville in the County of Tulare. The project comprises an earthen-fill dam, a spillway, an auxiliary earthen-fill dam, and a reservoir.

FISCAL YEAR 2018 ALLOCATION: $3,064,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,508,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including repair of the bulkhead gate and installation solar panels.

BUDGETED AMOUNT FOR FY 2020: M: $510,000 **O:** $2,219,000 **T:** $2,729,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,760,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a hydraulic steel structure inspection ($50,000).

RC: $826,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $83,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including GPS boundary survey and rectification.

WS: $60,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Project is currently not fully able to provide the benefits for which it was designed and constructed. Over the past 15 years multiple studies were performed to analyze the safety risk of Success Dam in its current state (without the spillway enlargement project). A Baseline Risk Assessment was completed and presented to the Dam Safety Oversight Group (DSOG) in July 2017. The dam was reclassified as a DSAC 3. A Level 3 Economic Update was completed in FY 2018. Design for the spillway enlargement project is currently underway.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 to FY 2019 was $89,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Terminus Dam (Lake Kaweah), CA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is 20 miles east of the city of Visalia in the County of Tulare, and is located on the Kaweah River. The project consists of an earthen-fill dam, an auxiliary earthen-fill dam, fuse gates, and a reservoir.

FISCAL YEAR 2018 ALLOCATION: $6,356,000

DESCRIPTIONS OF WORK FOR FY2018: Funds were used for commonly performed operation and maintenance (O&M) and for specific work activities including repairs to slide gate and steel liner.

FISCAL YEAR 2019 ALLOCATION: $2,757,000

DESCRIPTIONS OF WORK FOR FY 2019: Funding are being used for commonly performed O&M. Funds are also being used for specific work activities including an arc flash hazard analysis, replacement of bridge railings, and rehabilitation of a restroom.

BUDGETED AMOUNT FOR FY 2020: M: $482,000 **O:** $2,723,000 **T:** $3,205,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,152,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a hydraulic steel structure inspection ($60,000).

RC: $829,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $164,000 – Funds will be used for commonly performed O&M work.

WS: $60,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,139,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Yuba River, CA 2/

AUTHORIZATION: Rivers and Harbors Act of 1896, Rivers and Harbors Act of 1902, Water Resources Development Act of 1986

LOCATION AND DESCRIPTION: The project consists of a concrete debris barrier (Daguerre Point Dam), protective works (groins), and fish ladders. The project is located in the County of Yuba. The project holds back hydraulic mining sediment and debris to prevent navigation impacts downstream. The project was originally constructed by the California Debris Commission and was transferred to the U.S. Army Corps of Engineers in 1986.

FISCAL YEAR 2018 ALLOCATION: $171,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $178,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $162,000 **O:** $41,000 **T:** $203,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: N/A

H: N/A

EN: $203,000 – Funds will be used for commonly performed O&M. Funds will also be used for specific work activities including boundary monumentation and rectification for environmental stewardship ($162,000).

WS: N/A

OTHER INFORMATION: The Sacramento District was involved in litigation brought by the South Yuba River Citizens League regarding project impacts to Endangered Species Act listed species (salmon, steelhead and green sturgeon). As a result of the litigation, the Corps issued a Biological Assessment in October 2013 clarifying the discretionary activities at the dams. In May 2014, National Marine Fisheries Service issued a biological opinion that the proposed action is not likely to jeopardize the continued existence of the federally listed species.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $57,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bear Creek Lake, CO

AUTHORIZATION: Flood Control Act of 1968 (P.L. 90-483), Federal Water Project Recreation Act (P.L. 89-72)

LOCATION AND DESCRIPTION: Bear Creek Dam is located in the Denver metropolitan area on the southwest edge of Lakewood at the confluence of Bear Creek and Turkey Creek. Construction was authorized in 1968 and was completed in 1982. The main embankment measures 5,300 feet in length and has a maximum height of 179.5 feet; and the south embankment measures 2,100 feet in length with a maximum height of 65 feet. The reservoir impounded by the dam is 0.5 miles long with a maximum depth of 48 feet at the dam. The primary purpose of the dam is flood damage reduction. Fish and wildlife, and recreation are also authorized purposes.

FISCAL YEAR 2018 ALLOCATION: $411,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). In addition funds were used for non-routine items including: annual review/update of the Interim Risk Reduction Management Plan (IRRMP).

FISCAL YEAR 2019 ALLOCATION: $581,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including: repairs to the low level intake, a periodic inspection, and the annual review/update of the Interim Risk Reduction Management Plan.

BUDGETED AMOUNT FOR FY 2020: M: $89,000 **O:** $557,000 **T:** $646,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $577,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including: Surveys in Support of Periodic Inspection #13 ($90,000) and Weatherproof Right Abutment Pneumatic PZ Terminal House ($63,000).

RC: $10,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $59,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 totals $5.9 million. The project encompasses 2,313 land acres, 107 water acres with 5 miles of shoreline, and has a total reservoir storage capacity of 30 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $32,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Chatfield Lake, CO

AUTHORIZATION: Emergency Watershed Protection (P.L. 81-516), Water Resources Development Act of 1986 (P.L. 99-662), Federal Water Project Recreation Act (P.L. 89-72), Water Resources Development Act of 1974 (P.L. 93-251)

LOCATION AND DESCRIPTION: Chatfield Dam is located in the Denver metropolitan area southwest of Denver on the South Platte River. Construction was authorized in 1967 and was completed in 1975. The dam measures 13,136 feet in length and has a maximum height of 147 feet. Chatfield Lake is 2.0 miles long with a maximum depth of 47 feet at the intake tower. The project provides benefits to flood damage reduction, fish and wildlife, water supply, and recreation.

FISCAL YEAR 2018 ALLOCATION: $1,472,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for non-routine items including surveys and inspections and installation of a drainage system for the north side of the spillway structure.

FISCAL YEAR 2019 ALLOCATION: $1,870,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including repairing surficial damage of spillway slab and update of the Corps Water Management System model.

BUDGETED AMOUNT FOR FY 2020: M: $484,000 **O:** $1,477,000 **T:** $1,961,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,707,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including: Bridge Inspection Chatfield Intake Structure Bridge ($25,000) and Repair of Concrete Erosion Damage to Invert of Flood Control Conduit ($314,000).

RC: $153,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $101,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 totals $12.6 million. The project encompasses 6,745 land acres, 1,422 water acres with 9 miles of shoreline, and has a total reservoir storage capacity of 233 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $141,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cherry Creek Lake, CO

AUTHORIZATION: The Flood Control Act of 1941 (PL 77-228), 1944 (PL 78-534), and Fish and Wildlife Coordination Act (PL 79-732)

LOCATION AND DESCRIPTION: Cherry Creek Dam is located in the Denver metropolitan area in Aurora, Colorado. Construction of the dam was authorized in 1948 and was completed in 1950. The dam measures 14,300 feet in length and has a maximum height of 141 feet. Cherry Creek Reservoir is 3.25 miles long with a maximum depth of 46 feet at the intake tower under normal operation. The project provides benefits for flood damage reduction, fish and wildlife, and recreation.

FISCAL YEAR 2018 ALLOCATION: $945,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for non-routine items for application of herbicide to control woody vegetation in the emergency spillway.

FISCAL YEAR 2019 ALLOCATION: $6,414,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including: clean accumulated sediment out of the emergency spillway channel, install a new drainage system near the outlet works stilling basin, dewater and inspect the stilling basin, and review and update of the Interim Risk Reduction Management Plan.

BUDGETED AMOUNT FOR FY 2020: M: $61,000 **O:** $1,000,000 **T:** $1,061,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $896,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including: periodic inspection for Cherry Creek Lake ($100,000) and review and update of the IRRM plan ($30,000).

RC: $108,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $57,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 total $1.4 billion. The project encompasses 5,345 land acres, 844 water acres with 8 miles of shoreline, and has a total reservoir storage capacity of 91.9 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $119,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: John Martin Reservoir, CO

AUTHORIZATION: Flood Control Act of 1936 as Caddoa Reservoir, renamed in 1940.

LOCATION AND DESCRIPTION: John Martin Reservoir is located near Hasty in the County of Bent, about midway between the towns of Lamar and Las Animas. It is located on the Arkansas River at river-mile 1159, and 58 miles upstream from the Colorado and Kansas state line. The dam has a concrete section, an earthen section, two earthen wing dikes, and an overflow, gated spillway. A State Park is also located at the project.

FISCAL YEAR 2018 ALLOCATION: $9,124,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities included dewatering, inspecting, and armoring the stilling basin, and for dredging reservoir sediment.

FISCAL YEAR 2019 ALLOCATION: $4,041,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds will also be used for specific work activities including pipe and septic replacement, tainter gate trunnion pier repairs, and plans and specifications for replacing tainter gate side seals.

BUDGETED AMOUNT FOR FY 2020: M: $1,270,000 **O:** $2,595,000 **T:** $3,865,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,957,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the replacement of concrete dam raised sidewalks on both sides of crest road (1200 LF - 2400 LF total) ($250,000), and to complete design and issue a contract to Install of toe drain extensions at the Fort Lyon Levee, which protects a registered historic property and National Cemetery ($485,000).

RC: $190,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $718,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY 2018: flood control damages prevented $142.3 million, sediment control benefits $9.7 million, and irrigation benefits $34.3 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,707,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Trinidad Lake, CO

AUTHORIZATION: Flood Control Act of 1958

LOCATION AND DESCRIPTION: Trinidad Dam is located in the County of Las Animas, four miles upstream from the city of Trinidad and 250 miles from the city of Albuquerque, NM. It is located on the Purgatoire River at river mile 160.5, an Arkansas River tributary. The project consists of an earthen-fill dam, spillways, a reservoir, and recreation facilities. The State of Colorado operates and maintains the recreation areas.

FISCAL YEAR 2018 ALLOCATION: $5,103,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities included replacing the upstream embankment riprap, for parking lot resurfacing, and expanding and securing the project office site.

FISCAL YEAR 2019 ALLOCATION: $1,775,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $798,000 **O:** $1,507,000 **T:** $2,305,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,709,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacement of radio repeater antenna replacement ($160,000).

RC: $101,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $495,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including costs for salaries, contracts, supplies and materials needed to complete boundary line surveys, and maintenance and monitoring of boundary lines ($300,000).

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY2018: flood control damages prevented $86.9 million, sediment control benefits $3.6 million, and irrigation benefits $3.3 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $229,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Black Rock Lake, CT

AUTHORIZATION: The Flood Control Act of 1960 (P.L. 86-645).

LOCATION AND DESCRIPTION: Black Rock Lake is located on Branch Brook, about two miles upstream from its confluence with the Naugatuck River. The project is located in Thomaston and Watertown, Connecticut. Black Rock Lake is part of a comprehensive system of flood control within the Housatonic River Basin. The project consists of an earth-filled dam, 933-feet long with a maximum height of 154 feet; an uncontrolled chute spillway, 140-eet wide with a maximum discharge capacity of 33,500 cubic feet-per-second; and a rectangular outlet conduit with two control gates. The reservoir provides a flood storage capacity of 8,755 acre-feet to control runoff from its net drainage area of 20.4 square miles.

FISCAL YEAR 2018 ALLOCATION: $717,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded and evaluation of seismic stability was completed and electrical and concrete repairs were initiated.

FISCAL YEAR 2019 ALLOCATION: $691,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including required bridge inspections and required periodic inspection of the project.

BUDGETED AMOUNT FOR FY 2020: **M:** $206,000 **O:** $451,000 **T:** $657,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $552,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance of project roadways ($45,000).

RC: $51,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $54,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $330.1 million in flood damages since placed in service in 1971.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $377,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Colebrook River Lake, CT

AUTHORIZATION: The Flood Control Act of 1960 (P.L. 86-645)

LOCATION AND DESCRIPTION: Colebrook River Lake is located on the West Branch of the Farmington River, about 8.1 miles above its junction with the main stem of the Farmington River. The project is located in Colebrook, Connecticut, and the pool extends into Sandisfield and Tolland, Massachusetts. Colebrook River Lake is part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with rock slope protection, 1,300 feet long with a maximum height of 223 feet; an earth-filled dike 1,240 feet long with a maximum height of 54 feet; an uncontrolled ogee weir spillway, 205 feet wide with a maximum discharge capacity of 96,000 cubic feet per second; and a 10-foot diameter outlet tunnel with three control gates. The reservoir provides a flood storage capacity of 97,700 acre-feet to control runoff from its net drainage area of 118 square miles.

FISCAL YEAR 2018 ALLOCATION: $1,225,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded and update of the project master plan and to upgrade the electrical service was initiated.

FISCAL YEAR 2019 ALLOCATION: $2,557,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including the conduct of required inspections of three public use bridges, conduct required periodic inspection of project, conduct required periodic assessment of project, construct emergency access road to dam outlet works, relocate public and O&M access road/eliminate bridge, repairs to Colebrook Old Route 8 Bridge, and review of dam freeboard.

BUDGETED AMOUNT FOR FY 2020: M: $181,000 **O:** $598,000 **T:** $779,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $628,000 – Funds will be used for commonly performed O&M work.

RC: $62,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $81,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Project has prevented an estimated $159.4 million in flood damages since placed in service in 1969.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $520,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hancock Brook Lake, CT

AUTHORIZATION: The Flood Control Act of 1960

LOCATION AND DESCRIPTION: Hancock Brook Lake is located along Branch Brook, about two miles upstream from its confluence with the Naugatuck River in Connecticut. The project is located in Thomaston and Watertown, Connecticut. Hancock Brook Lake is part of a comprehensive system of flood control projects within the Housatonic River Basin. The project consists of an earth-filled dam with spillway and an un-gated outlet conduit.

FISCAL YEAR 2018 ALLOCATION: $679,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded and dam safety studies including updating the design flood, performing a rock stability analysis and completing a seismic evaluation were completed.

FISCAL YEAR 2019 ALLOCATION: $833,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds will be used for commonly performed O&M work. Funds are also being used for specific work activities including complete repairs to the dam and appurtenant structures as recommended in the periodic inspection and replace security fencing and project gates.

BUDGETED AMOUNT FOR FY 2020: **M:** $203,000 **O:** $383,000 **T:** $586,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $418,000 – Funds will be used for commonly performed O&M work.

RC: $51,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $117,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $102.9 million in flood damages since placed in service in 1966. The reservoir provides a flood storage capacity of 4,030 acre-feet to control runoff from its net drainage area of 12 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $219,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hop Brook Lake, CT

AUTHORIZATION: The Flood Control Act of 1960

LOCATION AND DESCRIPTION: Hop Brook Lake is located on Hop Brook, about 1.4 miles upstream from its confluence with the Naugatuck River in Connecticut. The project is located in Waterbury, Middlebury and Naugatuck, Connecticut. Hop Brook Lake is part of a comprehensive system of flood control projects within the Housatonic River Basin. The project consists of an earth-filled dam with a spillway and gate-controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $1,546,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded and the design and installation of compliant safety railings at the dam tower was initiated and the upgrade the electrical service to the project office and the dam site is completed.

FISCAL YEAR 2019 ALLOCATION: $1,272,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including conduct required periodic inspection of project and replace leaking tower roof.

BUDGETED AMOUNT FOR FY 2020: M: $301,000 **O:** $913,000 **T:** $1,214,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $$775,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including conduct bridge inspections ($3,000).

RC: $289,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $150,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $169.2 million in flood damages since placed in service in 1968. The reservoir provides a flood storage capacity of 6,970 acre-feet to control runoff from its net drainage area of 16.4 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $311,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mansfield Hollow Lake, CT

AUTHORIZATION: The Flood Control Act of 1941

LOCATION AND DESCRIPTION: Mansfield Hollow Lake is on the Natchaug River, about 5.3 miles upstream from its confluence with the Willimantic River. The project is in the towns of Windham and Chaplin, Connecticut, and is part of a comprehensive system of flood control projects within the Thames River Basin. The project consists of an earth-filled dam with stone slope protection, 14,050 feet long and a maximum height of 68 feet; six earth-filled dikes with a total length of 2,656 feet and a maximum height of 53 feet; an uncontrolled ogee weir spillway, 690-feet wide with a maximum discharge capacity of 106,600 cubic-feet- per-second; and five rectangular outlet conduits with 26 control gates. The reservoir provides a flood storage capacity of 52,000 acre-feet to control runoff from its net drainage area of 159 square miles.

FISCAL YEAR 2018 ALLOCATION: $1,531,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to develop an updated Inflow design flood and conduct a toe drain video inspection, to repair dam crest pavement, and to replace gatehouse electrical service.

FISCAL YEAR 2019 ALLOCATION: $776,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dive inspection of spillway area, hydraulic steel structure inspections, and management of a special status species.

BUDGETED AMOUNT FOR FY 2020: **M:** $71,000 **O:** $809,000 **T:** $880,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $783,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspections ($100,000).

RC: $51,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $46,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $256.3 million in flood damages since placed in service in 1952.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $272,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Northfield Brook Lake, CT

AUTHORIZATION: The Flood Control Act of 1960

LOCATION AND DESCRIPTION: Northfield Brook Lake is located in Thomaston, Connecticut, along Northfield Brook, about 1.3 miles upstream from its confluence with the Naugatuck River. Northfield Brook Lake is part of a comprehensive system of flood control projects within the Housatonic River Basin. The project consists of an earth-filled dam with an impervious core and stone slope protection, 810-feet long and a maximum height of 118 feet; an uncontrolled ogee weir spillway, 72-feet wide with a maximum discharge capacity of 8,800-cubic feet-per-second; and a 3-foot diameter outlet conduit with a control gate. The reservoir provides a flood storage capacity of 2,430 acre-feet to control runoff from its net drainage area of 5.7 square miles.

FISCAL YEAR 2018 ALLOCATION: $723,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to remove spillway discharge and channel safety improvements and for mater plan compliance.

FISCAL YEAR 2019 ALLOCATION: $448,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: **M:** $394,000 **O:** $442,000 **T:** $836,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $642,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic assessments ($50,000), dam spillway/discharge channel safety fence repairs and debris removal ($155,000), and replace security fencing and project gates ($128,000).

RC: $91,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $103,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including conducting a forest inventory and timber survey ($50,000).

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $116.8 million in flood damages since placed in service in 1965.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $503,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Stamford Hurricane Barrier, CT

AUTHORIZATION: The Flood Control Act of 1960

LOCATION AND DESCRIPTION: The Stamford Hurricane Barrier is located along the East and West Branches of Stamford Harbor and Westcott Cove in Stamford, Connecticut. The project includes the East Branch Barrier, an earth-filled dike with rock slope protection, a 90-foot wide gated opening for navigation and a 45,000 gallon-per-minute pump station to handle interior drainage. The project includes protection along the West Branch of Stamford Harbor, consisting of 1,349 feet of concrete wall, 160 feet of sheet pile bulkhead wall, 2,950 feet of earth-filled dike and a 229,500 gallon-per-minute pump station. The project also includes protection along Westcott Cove consisting of 4,400 feet of earth-filled dike and two pump stations with a total capacity of 85,500 gallons-per-minute.

FISCAL YEAR 2018 ALLOCATION: $776,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to complete repairs to the flood control barrier and appurtenant structures.

FISCAL YEAR 2019 ALLOCATION: $566,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including insulating the control room.

BUDGETED AMOUNT FOR FY 2020: **M:** $381,000 **O:** $470,000 **T:** $851,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $851,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacing operating building roofs ($285,000).

RC: N/A

H: N/A

ES: N/A

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $106.6 million in flood damages since placed into service in 1969.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $214,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Thomaston Dam, CT

AUTHORIZATION: The Flood Control Act of 1944

LOCATION AND DESCRIPTION: Thomaston Dam is located along the Naugatuck River, 30.4 miles upstream from its confluence with the Housatonic River. The project is located in Thomaston, Litchfield, Harwinton, and Plymouth, Connecticut. Thomaston Dam is part of a comprehensive system of flood control projects within the Housatonic River Basin. The project consists of an earth-filled dam with an uncontrolled side channel spillway and a gated-outlet.

FISCAL YEAR 2018 ALLOCATION: $1,673,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to clean and inspect the dam hydraulic power unit motors and conduct seepage analysis, removal of rock from spillway and cleaning of spillway weep holes, to repair the dam tower air vent and upgrade the portable public water system, to complete dam tower and utility building electrical upgrades and install channel stone protection, and for master plan compliance.

FISCAL YEAR 2019 ALLOCATION: $1,066,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspections and cleaning and inspection of the hydraulic motors.

BUDGETED AMOUNT FOR FY 2020: **M:** $427,000 **O:** $712,000 **T:** $1,139,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $883,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($10,000), repairs recommended in periodic assessment ($55,000), upgrade dam tower and utility building electrical systems ($26,000), replace security fencing and project gates ($138,000), and security system upgrade/replacement and monitoring services ($25,000).

RC: $94,000 **–** Funds will used for commonly performed O&M work.

H: N/A

EN: $162,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $1.44 billion in flood damages since placed in service in 1960. The reservoir provides a flood storage capacity of 42 thousand acre-feet to control runoff from its net drainage area of 97.2 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $782,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: West Thompson Lake, CT

AUTHORIZATION: The Flood Control Act of 1960

LOCATION AND DESCRIPTION: West Thompson Lake is located along the Quinebaug River, in the Town of Thompson, Connecticut. West Thompson Lake is part of a comprehensive system of flood control projects within the Thames River Basin. The project consists of an earth-filled dam with stone slope protection, 2,550-feet long and a maximum height of 69.5 feet; an earth-filled dike 1,650-feet long with a maximum height of 30 feet; an uncontrolled L-shaped ogee weir spillway, 320-feet wide with a maximum discharge capacity of 63,000-cubic feet-per-second; and a 12-foot diameter horseshoe-shaped outlet conduit with three control gates.

FISCAL YEAR 2018 ALLOCATION: $1,003,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to install a log boom and to complete gate stem hydraulic repairs.

FISCAL YEAR 2019 ALLOCATION: $884,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for non-routine work including to repair control values.

BUDGETED AMOUNT FOR FY 2020: **M:** $55,000 **O:** $756,000 **T:** $811,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $686,000 **–** Funds will be used for common O&M work. Funds will also be used for specific work activities including bridge inspections ($10,000).

RC: $93,000 **–** Funds will be used for common O&M work.

H: N/A

EN: $32,000 **–** Funds will be used for common O&M work.

WS: N/A

OTHER INFORMATION: The reservoir provides a flood storage capacity of 26.8 thousand acre-feet to control runoff from its net drainage area of 173.5 square miles. Project has prevented an estimated $91.8 million in flood damages since being placed in service in 1965.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $78,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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FLORIDA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Central & Southern Florida (C&SF), FL 2/

AUTHORIZATION: Flood Control Acts of 1948, 1954, 1958, 1960, 1962, 1965, and 1968; Water Resources Development Act (WRDA) of 1992, 1996, and 2000

LOCATION AND DESCRIPTION: The project, covering an area of approximately 16,000 square miles, lies within the southeasterly 18 counties of Florida, but also includes the upper St. Johns River Basin located in the northeastern section of the project; the Kissimmee River Basin in the central section; the Lake Okeechobee-Everglades in the central and southwestern section; and East Coast-Everglades in the southeastern section. The project provides for flood relief and water conservation and provides principally for an East Coast Protective Levee extending from Homestead area north to eastern shore of Lake Okeechobee near St. Lucie Canal; three conservation areas for water impoundment in Everglades area west of East Coast Protective Levee, with control structures to effect transfer of water as necessary; local protection works along lower east coast; encirclement of Lake Okeechobee agricultural area by levees and canals; enlargement of portions of Miami, North New River, Hillsboro, and West Palm Beach canals; enlargement of existing Lake Okeechobee levees and construction of new levees on the northeast and northwest shores of the lake; increased outlet capacity for improved control of Lake Okeechobee; floodway channels in the Kissimmee River Basin, with suitable control structures to prevent over drainage; an interrelated system of canals, levees, pumping stations and structures in southwest Dade County to control water levels; and facilities for regulation of floods in the upper St. Johns River Basin.

FISCAL YEAR 2018 ALLOCATION: $29,022,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including repairing heavily corroded culverts and flap gates on Canals C43 and C44, Phase 2 of 10 year plan to repair/replace 50 critical culverts, closure of WP Franklin swim beach and installation of cool roof coating and photovoltaic hybrid water heater at WP Franklin.

FISCAL YEAR 2019 ALLOCATION: $15,285,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including door/window/vent replacement; bridge inspections; dam safety inspections; a functional exercise; pest and invasive species management; and a revision of the Lake Okeechobee regulation schedule.

BUDGETED AMOUNT FOR FY 2020: M: $10,190,000 **O:** $9,128,000 **T:** $19,318,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: $18,018,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including operational conditional assessment ($50,000), formal periodic inspection and reports for Herbert Hoover Dike ($750,000), critical hurricane improvements of S-77 ($904,000), and revision of the LORS ($1,000,000).

RC: $710,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $590,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $4,248,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Intracoastal Waterway (IWW) - Jacksonville to Miami, FL

AUTHORIZATION: River and Harbor Acts of 1927 and 1945 (Public Law 79-14)

LOCATION AND DESCRIPTION: The entire length of the IWW lies within the Jacksonville District boundary. The inland, low use navigation project starts at the St. Johns River in Duval County at the northern most point and runs the entire length of the state where it ends in Miami Dade County. The IWW project authorizes a channel 12 feet deep by 125 feet wide from Jacksonville, FL south to Fort Pierce, Florida and 10 feet deep by 125 feet wide from Ft. Pierce, Florida south to Miami, Florida. The length of the project is approximately 349 miles.

FISCAL YEAR 2018 ALLOCATION: $3,524,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M). Non-routine work included geospatial land data migration.

FISCAL YEAR 2019 ALLOCATION: $2,950,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including maintenance dredging and environmental coordination.

BUDGETED AMOUNT FOR FY 2020: M: $3,150,000 **O:** $330,000 **T:** $3,480,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $3,480,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including plans and specifications ($250,000), environmental coordination ($250,000), maintenance dredging ($2,400,000), and supervision and administration ($250,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: A Memorandum of Agreement with the Florida Inland Navigation District (FIND) (non-Federal sponsor) to contribute funds for the operation and maintenance (O&M) of the IWW was executed on September 3, 1997. Since that date, FIND has provided over $55,000,000 for the O&M of the waterway. Over 14,000 tons of cargo passes through the IWW on an annual basis.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,810,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Jim Woodruff Lock and Dam, FL, AL & GA

AUTHORIZATION: Authorized by Rivers and Harbors Act of 1945, as last amended by Water Resources Development Act of 1986 (P.L. 99-662).

LOCATION AND DESCRIPTION: The multiple-purpose project is located at mile 107.3 on the Apalachicola River at the confluence of the Chattahoochee and Flint Rivers (ACF), about 45 miles northwest of Tallahassee, Florida. The project includes a dam, powerhouse, navigation lock, fixed and gated spillways, 39 recreational areas and a 37,500-acre reservoir (Lake Seminole) with 532 miles of shoreline.

FISCAL YEAR 2018 ALLOCATION: $7,948,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M)and sustainability work to install low consumption valves in restroom facilities.

FISCAL YEAR 2019 ALLOCATION: $7,484,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including pest and invasive species management and a dam safety periodic assessment.

BUDGETED AMOUNT FOR FY 2020: M: $3,611,000 **O:** $4,591,000 **T:** $8,202,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $380,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including operations condition assessment ($25,000).

FRM: N/A

RC: $1,230,000 – Funds will be used for commonly performed O&M work.

H: $3,552,000 – Funds will be used for commonly performed O&M work.

EN: $1,741,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Master Plan compliance ($600,000).

WS: N/A

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,299,000 shared between business lines as follows: HYD - 35% and NAV - 65%. Funds will be used for commonly performed O&M work. The power plant has a capacity of 43,350 kilowatts.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $633,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Okeechobee Waterway (OWW), FL 2/

AUTHORIZATION: River and Harbor Acts of 1945 and 1960 (Public Laws 79-14 and 86-645)

LOCATION AND DESCRIPTION: The high use, shallow draft inland navigation project provides a 155-mile long channel across the state from Fort Myers to Stuart and its maintained depth ranges from 8 feet to 10 feet. The waterway runs through Lake Okeechobee and consists of the Caloosahatchee River on the west side of the lake and the St. Lucie Canal on the east side. The project includes navigation locks at Ortona, Moore Haven, and St. Lucie. Additional locks at W. P. Franklin and Port Mayaca, authorized under the Central and Southern Florida project, are also located within the waterway.

FISCAL YEAR 2018 ALLOCATION: $1,566,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including Moore Haven Lock building envelope improvement, Saint Lucie Campground water line replacement, Ortona Lock South Campground water fixture replacement, and repair of erosion damage to fishing pier footing and shoreline sloughing at Ortona South.

FISCAL YEAR 2019 ALLOCATION: $1,322,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to replace fixtures and to update the shoreline management plan.

BUDGETED AMOUNT FOR FY 2020: M: $164,000 **O:** $1,048,000 **T:** $1,212,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

H: N/A

RC: $604,000 – Funds will be used for commonly performed O&M work.

EN: $608,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: There are currently six special status species with Fish and Wildlife Service Recovery Plans inhabiting project lands and waters. These include manatee, Everglades snail kite, Okeechobee gourd, Eastern Indigo snake, crested caracara, and the wood stork. The waters and lands of the OWW project are infested with invasive species. Target species for removal include Brazilian pepper, Australian pine, air potato, Melaleuca, water hyacinth, water lettuce, alligator weed, cogon grass, sailfin catfish, fire ant, wild boar, and giant apple snail. The OWW and Central and South Florida projects contain 402 miles of shoreline and 654 miles of boundary. OWW has an annual visitation estimated at approximately 6 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $130,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.
2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: South Florida Ecosystem Restoration (Everglades), FL

AUTHORIZATION: The SFER Operation and Maintenance (O&M) program is comprised of the Central & Southern Florida (C&SF) project, the US Department of Interior (DOI) Modified Water Deliveries to Everglades National Park, Florida (MWD) project and the Everglades and South Florida (E&SF) Seminole Big Cypress project.

- C&SF (includes the Comprehensive Everglades Restoration Plan [CERP]) Authorization for O&M was contained in WRDA 2000 (Public Law (PL) 106-543), Section 601 (e)(4).
- MWD was authorized under PL 101-229 of the 1989 Everglades National Park Protection and Expansion Act. PL 108-7 was passed in 2003. PL 111-8 was passed in 2009.
- E&SF: Seminole Big Cypress Reservation Water Conservation Plan (part of the Critical Projects, Florida) Authorization for O&M was contained in WRDA 2000 (PL 106-543), Section 601 (e) (4).

LOCATION AND DESCRIPTION: The South Florida Ecosystem Restoration Program stretches from the southern Orlando area southward across the Everglades, the Florida Keys, the contiguous and near-shore waters of South Florida, and across South Florida from east to west including portions of the drainage areas of the Indian River Lagoon and the Caloosahatchee River, as well as population centers along the southeast and southwest coasts. It encompasses an area of approximately 18,000 square miles, which includes all or part of 18 counties in the southeast part of the State of Florida.

FISCAL YEAR 2018 ALLOCATION: $887,000 2/

DESCRIPTIONS OF WORK FOR 2018: Funds were used for routine operations and maintenance (O&M) activities in support of aquatic ecosystem restoration.

FISCAL YEAR 2019 ALLOCATION: $6,537,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $577,000 **O:** $4,877,000 **T:** $5,454,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020: Funds will be used for commonly performed O&M work related to Manatee Pass Gates and biological opinions for C 111 South Dade Cape Sable Seaside Sparrow, C&SF Programmatic Jeopardy Biological Opinion July 2016 (COP), and Modified Water Deliveries Everglades Restoration Transition Plan (ERTP).

N: N/A

FRM: N/A

RC: N/A

H: N/A

EN: $5,454,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The SFER program currently has multiple Biological Opinions for the operation of the SFER system.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 into FY 2019 is $404,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ In addition to the net allocation shown on this justification sheet, $3,803,000 was allocated to the Central & Southern Florida, FL project and the funds are included in that project's Fiscal Year 2018 Allocation amount.

GEORGIA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Allatoona Lake, GA

AUTHORIZATION: Flood Control Acts of 1941 and 1944, Section 4.

LOCATION AND DESCRIPTION: This 37,000 acre multi-purpose flood risk management project is located on the Etowah River, a segment of the Alabama-Coosa-Tallapoosa (ACT) Rivers System, 48 miles above Rome, Georgia. The project includes a dam, hydroelectric powerhouse, gated spillway, a reservoir, 23 Corps of Engineers recreation areas and 54 non-Federal recreation areas.

FISCAL YEAR 2018 ALLOCATION: $10,575,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities included turbine design and intake emergency closure gate refurbishment design.

FISCAL YEAR 2019 ALLOCATION: $12,164,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being for specific work activities including boundary monumentation and rectification, remove trees from saddle dikes, repair blocked foundation drains, dam safety formal periodic inspection, and replacement of McKinney Campground's on-site sewage system to county sewage system.

BUDGETED AMOUNT FOR FY 2020: M: $3,098,000 **O:** $5,649,000 **T:** $8,747,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $105,000 – Funds will be used for commonly performed O&M work.

RC: $3,504,000 – Funds will be used for commonly performed O&M work.

H: $3,132,000 – Funds will be used for commonly performed O&M work.

EN: $737,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary monumenation and rectification ($110,000).

WS: $191,000– Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including water supply agreement management ($25,000).

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,078,000 share between business lines as follows: HYD - 78% and FRM – 22%. Funds will be used for commonly performed O&M work. This project is located within the ACT Rivers System and 33 miles north of Atlanta, Georgia. The lake is an important source of storage for the Atlanta Metropolitan Area's water supply. The project provides more than 51 million gallons per day for water supply. The project has a hydropower capacity of 82,000 kilowatts.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,065,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Apalachicola, Chattahoochee and Flint (ACF) Rivers, GA, AL and FL

AUTHORIZATION: River and Harbor Act of 1945, Section 2; modified by Water Resources Development Act of 1986

LOCATION AND DESCRIPTION: The project is located in southeast Alabama, southwest Georgia and northwest Florida. The project is a low-use inland navigation waterway and includes a 9-foot by 100-foot navigation channel in the Apalachicola River, Florida, a 9-foot by 100-foot channel in the Flint River, Georgia to the City of Bainbridge, and a 9-foot by 100-foot navigation channel on the Chattahoochee River in Alabama and Georgia to Columbus, Georgia. The project includes George W. Andrews Lock on the Chattahoochee River in Early County, Georgia. George W. Andrews Lock is in caretaker status. Jim Woodruff Lock and Dam, Walter F. George Lock and Dam, West Point Dam and Lock, and Buford Dam and Lake Sidney Lanier projects on the ACF system are each funded separately.

FISCAL YEAR 2018 ALLOCATION: $1,937,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities include master plan updates.

FISCAL YEAR 2019 ALLOCATION: $1,337,000

DESCRIPTIONS OF WODK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dam safety periodic assessment and annual safety report.

BUDGETED AMOUNT FOR FY 2020: M: $287,000 **O:** $1,335,000 **T:** $1,622,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,330,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including annual dam safety periodic inspection ($191,000).

FRM: N/A

RC: $93,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including environmental compliance management ($5,000)

H: N/A

EN: $199,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: There are several threatened and endangered species in the lower part of the system.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $199,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Atlantic Intracoastal Waterway (AIWW), GA

AUTHORIZATION: Rivers and Harbors Act of 1880; House Document 295, 53rd Congress., 3rd session; House Document 41, 52nd Congress, 1st session; House Document 450, 58th Congress, 2nd session; House Document 1236, 60th Congress, 2nd session; Senate Document 6, 81st Congress, 1st session; House Document 581, 63rd Congress, 2nd session; House Document 1391, 62nd Congress, 3rd session; Senate Document 178, 68th Congress, 2nd session; Senate Document 43, 71st Congress, 2nd session; Senate Committee Print,74th Congress., 1st session; Rivers and Harbors Committee, Document 6, 75th Congress, 3rd session; House Document 618, 75th Congress, 3rd session; House Document 114, 77th Congress, 1st session; Section 107, P.L. 86-645.

LOCATION AND DESCRIPTION: The Savannah District's portion of the AIWW begins in the County of Beaufort, South Carolina at Port Royal Sound (mile 552) and continues south through the Counties of Jasper, South Carolina; Chatham, Bryan, Liberty, McIntosh, Glynn, and Camden Counties, Georgia. The end of the Savannah District's portion is at mile 713 in Cumberland Sound, GA. The low use, inland waterway crosses two deep draft harbors: Savannah Harbor and Brunswick Harbor. The project has an authorized depth of 12 feet deep mean lower low water (MLLW) and an authorized width of 90 feet inland cut and 150 feet in natural waterways.

FISCAL YEAR 2018 ALLOCATION: $179,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,970,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds will be used for commonly performed O&M. Funds will also be used for specific work activities which includes maintenance dredging.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $200,000 **T:** $200,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $200,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $100,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Buford Dam and Lake Sidney Lanier, GA

AUTHORIZATION: Authorized by Rivers and Harbors Act of 1945, as last amended by Water Resources Development Act of 1986 (P.L. 99-662).

LOCATION AND DESCRIPTION: The multiple-purpose project is located approximately 40 miles north of Atlanta, Georgia on the Chattahoochee River in the Counties of Gwinnett, Hall, Dawson, Lumpkin and Forsyth. The project includes a hydroelectric powerhouse, a 39,000 acre flood risk management reservoir with 692 miles of shoreline, and 83 recreation facilities.

FISCAL YEAR 2018 ALLOCATION: $11,251,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities included design of the emergency intake closure gate, installation of manholes in saddle dike 3 to monitor suspected leakage, and work to complete the Master Plan and sustainability work to repair water line pipes.

FISCAL YEAR 2019 ALLOCATION: $11,356,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dam safety periodic inspection, critical infrastructure repairs, environmental assessment for Buford Dam road repair, remediation actions for iron eating bacteria, continue master plan development, updating shoreline management database, and replacing generator fire suppression system.

BUDGETED AMOUNT FOR FY 2020: M: $ 3,048,000 **O:** $7,214,000 **T:** $10,262,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $45,000 – Funds will be used for commonly performed O&M work.

RC: $4,165,000 – Funds will be used for commonly performed O&M work.

H: $3,023,000 – Funds will be used for commonly performed O&M work.

EN: $1,711,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including update to the shoreline management database ($40,000) and boundary maintenance ($250,000).

WS: $175,000 – Funds will be used for commonly performed O&M work. Fund will also be used for specific work on water supply agreement management.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,143,000 shared between business lines as follows: HYD - 75%, NAV – 4%, and FRM - 21%. Funds will be used for commonly performed O&M work. This project is currently the main source of drinking water for the Atlanta Metropolitan area and has a hydropower capacity of 127,000 kilowatts.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $465,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Carters Dam and Lake, GA

AUTHORIZATION: Authorized by Rivers and Harbors Act of 1945, as last amended by Water Resources Development Act of 1986 (P.L. 99-662).

LOCATION AND DESCRIPTION: This multiple-purpose 8,577 acre project is located on the Coosawattee River, a portion of the Alabama-Coosa-Tallapoosa (ACT) River System, 26.8 miles above the mouth of the river, near Chatsworth, Georgia. The project includes a dam, hydroelectric powerhouse (master plant that also controls Allatoona and Buford), a flood risk management reservoir and 10 recreational areas.

FISCAL YEAR 2018 ALLOCATION: $8,532,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included re-regulation of dam saw cutting and sustainability work included installation of install cool roofs on gatehouses and comfort stations.

FISCAL YEAR 2019 ALLOCATION: $7,515,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including erosion repair at Spillway Gate #2, dive inspections, and replacement of generator fire suppression system.

BUDGETED AMOUNT FOR FY 2020: M: $4,078,000 **O:** $3,288,000 **T:** $7,366,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $105,000 – Funds will be used for commonly performed O&M work.

RC: $1,234,000 – Funds will be used for commonly performed O&M work. Funds will used for specific work activities including environmental compliance management ($20,000).

H: $4,249,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including analysis of hydropower operational data ($25,000).

EN: $305,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,465,000 shared between business lines as follows: HYD - 65% and FRM - 35%. Funds will be used for commonly performed O&M work. The Carters project includes a main dam and a reregulation dam. Two of the four generators can be reversed and utilized as pumpback units to pump water back to the main reservoir during non-peak generation hours for reuse during peaking hours. The total hydropower capacity is more than 479,000 kilowatts and supplies approximately 2 million gallons/day in water supply.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $183,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hartwell Lake, GA and SC 2/

AUTHORIZATION: Flood Control Acts of 1950 and 1958; Water Resources Development Act of 1976

LOCATION AND DESCRIPTION: The project is located midway between Atlanta, Georgia and Charlotte, North Carolina. The dam is a concrete gravity type; 1,900 feet long and 225 feet high with a 568-foot controlled spillway. The project provides 2,843,000 acre-feet of storage with 1,416,000 acre-feet allocated to hydropower, 293,000 acre-feet to flood control and 1,134,000 acre-feet to inactive storage. The project also boasts 962 miles of shoreline, 55,950 acres of water, and 20,933 acres of land.

FISCAL YEAR 2018 ALLOCATION: $12,570,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to replace outdoor lighting at the Visitor's Center and 16 recreation areas with LED fixtures, weir repair design and construction, updating the Master Plan and Shoreline Management Plan, and surveying and resetting missing boundary line monuments.

FISCAL YEAR 2019 ALLOCATION: $12,558,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing Power Plant fire suppression system, and surveying and resetting additional missing boundary line monuments.

BUDGETED AMOUNT FOR FY 2020: M: $3,915,400 **O:** $6,499,200 **T:** $10,414,600 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: $233,000 – Funds will be used for commonly performed O&M work.

RC: $3,861,000 – Funds will be used for commonly performed O&M work.

H: $3,838,000 – Funds will be used for commonly performed O&M work.

EN: $1,682,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including resetting missing monuments to protect encroachments ($125,000).

WS: $70,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $730,600 shared between business lines as follows: HYD – 90% and FRM – 6%. In FY 2017, $1,437,000 in Recreation revenue was returned to the United States Treasury. The project's annual average visitation is 8.6 million visitors. The project supplied 20 communities with water. The Hartwell Power Plant produced 242,939 mega-watt hours in FY 2017 with $22,336,000 returned to the United States Treasury. Total cumulative flood damages prevented is over $96,717,000.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $970,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: J. Strom Thurmond (JST) Dam and Lake, GA and SC 2/

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The dam is located 22 miles north of Augusta, Georgia in Clarks Hill, SC, and consists of a 2,282-foot long, 200-foot high concrete section and a controlled spillway, 1,096 feet long. It provides a total storage of 2,900,000 acre-feet. The authorized project purposes include Hydropower, Flood Control, Recreation, Water Supply/Water Quality, Fish and Wildlife, and Navigation (no longer operated for NAV as there is no commercial traffic). The multi-purpose project's 80,000 acres of land, 70,000 acres of water, and 1,200 miles of shoreline inhabit seven counties in Georgia and South Carolina.

FISCAL YEAR 2018 ALLOCATION: $11,900,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $11,084,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including septic system repairs, boundary surveying and recertification, revision of the Master Plan, and fisheries management.

BUDGETED AMOUNT FOR FY 2020: M: $2,865,000 **O:** $7,779,200 **T:** 10,644,200 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $3,248,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to conduct an Operations Condition Assessment ($25,000).

H: $4,385,000 – Funds will be used for commonly performed O&M work.

EN: $2,137,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary surveying and recertification ($16,000), pest and invasive species management ($78,000), complete revision of the project Master Plan ($175,000), and creel surveys to monitor the impacts of hydrilla control efforts ($115,000).

WS: $82,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $792,200 shared between business lines as follows: HYD – 85% and FRM – 7%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,301,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Richard B. Russell (RBR) Dam and Lake, GA and SC

AUTHORIZATION: Flood Control Act of 1950 and 1958; Water Resources Development Act of 1976

LOCATION AND DESCRIPTION: The dam is located on the Savannah River, near Calhoun Falls, South Carolina, and is 59 miles north of Augusta, Georgia. The dam has a concrete section 1,884-feet long with a maximum height of 210 feet and a controlled spillway 590-feet long. It provides 1,166,200 acre-feet of storage, of which 126,800 acre-feet are allocated for hydropower, 140,000 for flood control, and 899,400 for inactive storage.

FISCAL YEAR 2018 ALLOCATION: $8,913,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included geospatial land data migration.

FISCAL YEAR 2019 ALLOCATION: $9,584,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including design to repair and upgrade the power plant bridge crane, the gantry crane, dam safety precise alignment survey, and dam safety tabletop emergency exercise.

BUDGETED AMOUNT FOR FY 2020: M: $4,451,000 **O:** $4,780,000 **T:** $9,231,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $251,000 – Funds will be used for commonly performed O&M work.

H: $6,209,000 – Funds will be used for commonly performed O&M work.

EN: $252,000 – Funds will be used for commonly performed O&M work.

WS: $70,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $2,449,000 shared between business lines as follows: FRM - .25%, HYD - 79% and REC – 20.75%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection for hydraulic steel structures and critical welds ($31,000). The RBR Power Plant produced 427,266 megawatt hours in FY 2018 and returned $33.4 million to the U.S. Treasury.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $148,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: West Point Dam and Lake, GA and AL

AUTHORIZATION: Flood Control Act of 1963

LOCATION AND DESCRIPTION: The multiple-purpose project is located approximately 70 miles southwest of Atlanta, Georgia, on the Chattahoochee River in Troup and Heard Counties, Georgia, and Chambers County, Alabama. The project includes a hydroelectric powerhouse, a 26,000-acre flood damage reduction reservoir with over 500 miles of shoreline, 31,000 acres of public land, and 38 recreation facilities.

FISCAL YEAR 2018 ALLOCATION: $11,552,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included designing refurbishment of the emergency closure intake gate, designing turbine replacement, replacing generator circuit breaker, geospatial land data migration, and sustainability work to replace old, fragile, failing water lines in three facilities on West Point Lake.

FISCAL YEAR 2019 ALLOCATION: $9,600,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including generator replacement design for Unit #1, repainting of spillway gates, and continuing shoreline management plan.

BUDGETED AMOUNT FOR FY 2020: M: $3,297,000 **O:** $4,528,000 **T:** $7,825,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $105,000 – Funds will be used for commonly performed O&M work.

RC: $2,384,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including environmental compliance ($20,000).

H: $3,266,000 – Funds will be used for commonly performed O&M work.

EN: $936,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,134,000 shared between business lines as follows: HYD - 45%, NAV - 2%, FRM - 15%, ENS – 11% and REC - 27%. Funds will be used for commonly performed O&M work. The average annual amount of flood damages prevented is over $5.5 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $5,040,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Barbers Point Deep Draft Harbor, Oahu, HI

AUTHORIZATION: River and Harbor Act of 1965, PL 89-298

LOCATION AND DESCRIPTION: The Barbers Point Harbor is a Federally-authorized, medium-use, deep-draft harbor on Oahu on the Ewa plain about 20 miles west of Honolulu, and the associated Pacific Regional Visitor Center (PRVC) which is located on the second floor of historic Battery Randolph at Fort DeRussy adjacent to Waikiki Beach. The PRVC functions as an informational visitor center, designed to educate the public on the Corps' work in the Pacific and focuses on the Honolulu District's Civil Works Water Resources Development Program. It serves over 76,000 visitors a year.

FISCAL YEAR 2018 ALLOCATION: $266,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $292,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $297,000 **T:** $297,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $297,000 – Funds will be used for commonly performed O&M.

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $105,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Albeni Falls Dam, ID

AUTHORIZATION: Flood Control Act of 1950 (P.L. 81-516) and Section 4 of the Flood Control Act of 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: Albeni Falls Dam is 26 miles west of Sandpoint, Idaho and 4 miles east of Newport, Washington on the Pend Oreille River in Bonner County, Idaho. It is located downstream of Avista's Cabinet Gorge Dam and upstream of the Pend Oreille Utility District's Box Canyon Dam, approximately 40 miles north of Spokane, Washington. The dam is a 90-foot-high concrete gravity, gate-controlled structure with a spillway 472 feet long. Overall length, including the non-overflow abutment section, is 755 feet. Ten spillway gates are the vertical lift roller-chain type. The powerhouse contains three Kaplan turbines and generators for a total installed rated capacity of 42.6 megawatts. The project is multi-purpose, providing flood control, power generation, and regulation of stream flow for 15 downstream federal and non-federal hydroelectric projects. Lake Pend Oreille water storage seasonally augments flows on the Columbia and Pend Oreille Rivers for power production downstream. Operation of Albeni Falls Dam project allowed for installation of additional units at Chief Joseph and McNary Dams, increasing the Federal Columbia River Power System firm power capabilities by 251 megawatts. Other purposes include navigation, recreation, and fish and wildlife conservation.

FISCAL YEAR 2018 ALLOCATION: $1,309,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funding was also used for non-routine activities to include the National Environmental Policy Act (NEPA) Analysis of the Columbia River Basin Operations, repair of Clark Fork drift yard and spillway gate recoating.

FISCAL YEAR 2019 ALLOCATION: $1,185,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities to include the NEPA Analysis of the Columbia River Basin Operations, installation of boater safety boom, and spillway gate recoating and weld repair.

BUDGETED AMOUNT FOR FY 2020: M: $50,000 **O:** $1,129,000 **T:** $1,179,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $1,048,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M work of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $31,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bank stabilization ($8,000) and boundary and flowage easement surveying and maintenance ($2,000).

WS: N/A

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joine activities, with a total allocation of $100,000 shared between business lines as follows: NAV – 50% and FRM – 50%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to include the NEPA Analysis of the Columbia River Basin Operations ($10,000) and Spillway Gate Recoating and Weld Repair ($23,000). Albeni Falls Dam project hosts the largest recreation program in Seattle District. It supports four major recreation areas and two day use areas that include campgrounds, fishing docks, boat ramps, swim beaches, picnicking, playgrounds, trails, interpretation, and a Class B Visitor Center with displays, restrooms, a theater, and tours. The project produces approximately 179,000 megawatt-hours of electricity, enough for 16,000 homes.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $115,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Dworshak Dam and Reservoir, ID

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: A multi-purpose project located in Northern Idaho on the north fork of the Clearwater River; near Orofino, ID. The project is part of the Federal Columbia River Power System. The project includes the dam, a reservoir that has a gross storage capacity of 3,468,000 ac-ft of water, a powerhouse with an installed capacity of 400 Megawatts, 30,935 acres of land that provides recreation facilities and wildlife mitigation habitat, and the Dworshak National Fish Hatchery.

FISCAL YEAR 2018 ALLOCATION: $4,747,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including monolith 37/38 and 16/17 foundation joint drain repairs, flow meters, and light fixtures.

FISCAL YEAR 2019 ALLOCATION: $4,853,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a National Fish Hatchery Major Maintenance Report, continue the monolith 37/38 and 16/17 foundation joint drain repairs, installation of a monitoring alarm system to prevent fish mortality, and design of two recirculating circular fish tanks.

BUDGETED AMOUNT FOR FY 2020: M: $2,395,000 **O:** $2,036,000 **T:** $4,431,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $870,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $203,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $3,358,000 shared between business lines as follows: NAV – 16% and FRM – 84%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including completion of the monoliths 37/38 and 16/17 foundation joint drain repairs ($400,000), upgrade the regulating outlets ($932,000), and the preparation of the environmental documentation for the Columbia River System Operations ($166,000). The project includes Dworshak Dam, Dworshak Reservoir land, powerhouse, recreation facilities, wildlife mitigation and Dworshak National Fish Hatchery. Since 1972, $78 million in potential flood damages have been prevented. The dam is the highest straight-axis concrete dam in the Western Hemisphere with a structural height of 717 ft. The project encompasses about 51 thousand acres of which 31 thousand acres provide recreation facilities and wildlife mitigation habitat.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,212,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lucky Peak Dam and Lake, ID

AUTHORIZATION: Flood Control Act of 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: Project is located in Southern Idaho on the Boise River, 15 minutes from Boise, Idaho. The project includes the dam, and a flood control and irrigation reservoir that has a gross storage capacity of 306,000 acre-feet of water. The reservoir and 4,288 acres of land provides recreation facilities to over a million visitors annually and valuable wildlife mitigation habitat.

FISCAL YEAR 2018 ALLOCATION: $3,648,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including for water lines, for slide gate replacement, for security gate replacement, and for hoist gear alignment.

FISCAL YEAR 2019 ALLOCATION: $10,893,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including continued slide gate cylinder repair work, replacement of the guard rails along both sides of the dam crest road, and design and replacement of both emergency gate hoists.

BUDGETED AMOUNT FOR FY 2020: M: $983,000 **O:** $2,419,000 **T:** $3,402,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,419,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including continued slide gate cylinder repair work ($436,000), periodic inspections ($295,000) and a building energy audit ($20,000).

RC: $784,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $199,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to install a new boundary fence to reduce encroachment ($44,000).

WS: N/A

OTHER INFORMATION: The project consists of the dam, Lucky Peak Lake and associated federal lands. The project provides for flood damage reduction, recreation, wildlife habitat and irrigation. Since 1961, more than $2.4 million in potential flood damages have been prevented by the Lucky Peak Project.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,182,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

ILLINOIS

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Carlyle Lake, IL

AUTHORIZATION: Flood Control Acts of 1938, 1944, and 1958.

LOCATION AND DESCRIPTION: The project, completed in 1967, is located on Kaskaskia River, approximately 107 miles above its mouth, near the community of Carlyle, Illinois. Portions of the project are situated in Clinton, Fayette, Bond, and Marion Counties. Carlyle Lake is the largest man-made lake in Illinois, with over 26,000 acres of water and 11,000 acres of public land. It provides flood control, water quality control and water supply to nearby communities, recreation, and fish and wildlife conservation. It is authorized to augment navigation flows downstream on the Kaskaskia River.

FISCAL YEAR 2018 ALLOCATION: $7,241,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) and to complete efficiency improvements at Boulder Sewage Treatment Plant.

FISCAL YEAR 2019 ALLOCATION: $5,887,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M Work. Funds also being used for specific work including Environmental Review Guide for Operations (ERGO) inspections & reporting.

BUDGETED AMOUNT FOR FY 2020: M: $1,231,000 **O:** $4,506,000 **T:** $5,737,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,263,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including implementation of modern geospatial data and system technologies ($5,000).

RC: $2,800,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $635,000 – Funds will be used for commonly performed O&M work.

WS: $39,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: FY 2017 project visitation was 1.53 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $116,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Chicago River, IL

AUTHORIZATION: Rivers and Harbors Acts of 1899, 1902, 1907, and 1946

LOCATION AND DESCRIPTION: The Chicago River is located in northeastern Illinois, within the corporate limits of the City of Chicago and Cook County. The project consists of a navigation channel that is 2.97 miles long and 21 feet deep from Michigan Avenue to North Avenue. A navigation channel, 3.7 miles long and 9 feet deep from North Avenue to Addison Street has also been authorized, but not constructed. The project also includes a responsibility for water control, as well as routine and emergency monitoring of waterways within the Chicago District.

FISCAL YEAR 2018 ALLOCATION: $587,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for river operation in a major urban area and to collect precipitation and streamgage data for flood surveillance for City of Chicago, Emergency Management and National Weather Service (NWS) River Forecast Center.

FISCAL YEAR 2019 ALLOCATION: $283,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $612,000 **T:** $612,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $612,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $110,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Chicago Sanitary and Ship Canal Dispersal Barriers, IL

AUTHORIZATION: Section 105, Consolidated Appropriations Act of 2012 (P.L. 112-74), Section 126, Energy & Water Development Appropriations Act of 2010 (P.L. 111-85), Section 3061, Water Resources Development Act 2007 (P.L. 110-114). Barrier I: Section 1202, Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990 (P.L. 101-646), as amended, Section 2309, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery 2006 (P.L. 109-234). Barrier II: Section 1135, Water Resources Development Act 1986 (P.L. 99-662), as amended, (Continuing Authority Program), Section 345, FY 2005 DC Appropriations Act (P.L. 108-335).

LOCATION AND DESCRIPTION: The Chicago Sanitary and Ship Canal (CSSC) is a man-made waterway that connects the Chicago and Des Plaines Rivers. It is a part of the Chicago Area Waterway System, the only continuous waterway connection between the Great Lakes and Mississippi River basins. The dispersal barrier system was developed to deter the spread of invasive fish species between these watersheds. It includes the construction and operation of three electrical barriers, known as Barrier I, Barrier IIA, and Barrier IIB. Barrier I was constructed as a demonstration project and has been operating in the CSSC since 2002. A permanent electric barrier (Barrier II) was implemented in two independent stages (A & B). Barrier IIA has been operational since April 2009. Barrier IIB has been operational since April 2011. Construction of a permanent Barrier I to replace the demonstration project was initiated in fiscal year (FY) 2013 and will be completed using previously appropriated funds.

FISCAL YEAR 2018 ALLOCATION: $16,533,000 1/

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the entire electric dispersal barriers system (Demonstration Barrier, Barrier IIA, & Barrier IIB) and the structural solutions to reduce the risk of fish bypass during flooding of the neighboring Des Plaines River and Illinois and Michigan Canal; safety testing and fish monitoring; and completion of additional field and/or laboratory research to verify the effectiveness of the barriers and optimize their operation, where possible.

FISCAL YEAR 2019 ALLOCATION: $18,731,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for operation and maintenance of the entire electric dispersal barriers system (Demonstration Barrier, Barrier IIA, & Barrier IIB), a backup generator maintenance support contract, a contract for clearing and trimming of vegetation along the Des Plaines River barrier, a contract to replace the narrow array electrodes at Barrier IIB, site security to prevent unauthorized visitors and access, cybersecurity, real estate support, field and/or laboratory research to verify the effectiveness of the barriers and optimize their operation, labor, power to the building, fuel for the Backup Generators, utility bills.

BUDGETED AMOUNT FOR FY 2020: M: $3,648,000 **O:** $10,295,000 **T:** $13,943,000 2/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: N/A

H: N/A

EN: $13,943,000 – Funds will be used for operation and maintenance of the entire electric dispersal barriers system (Barriers I, IIA, & IIB) and backup generators, including project management, contracting, environmental support, site security, cybersecurity, utility bills, vehicles, labor, and clearing and trimming of vegetation along the Des Plaines River barrier as well as ongoing telemetry work to verify the effectiveness of the barriers and to optimize their operation.

WS: N/A

OTHER INFORMATION: N/A

1/ Prior to FY 2018, both the construction and operation and maintenance of this project was funded in the Construction account. All construction activities have been funded to completion.
2/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $157,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Farm Creek Reservoirs, IL

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project includes two reservoirs (Fondulac and Farmdale) located on tributary streams to the Illinois Waterway upstream of Peoria, Illinois providing flood control for East Peoria, Illinois.

FISCAL YEAR 2018 ALLOCATION: $500,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and to complete the master plan.

FISCAL YEAR 2019 ALLOCATION: $459,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used to conduct routine operation and maintenance of flood risk reduction infrastructure, and tree removal for dam safety.

BUDGETED AMOUNT FOR FY 2020: M: $122,000 **O:** $415,000 **T:** $537,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $423,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to conduct a periodic inspection and operational condition assessment of the project ($85,000).

RC: N/A

H: N/A

EN: $114,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including real estate and legal costs to research titles, establish property line and needed coordination to sell the unneeded property ($100,000).

WS: N/A

OTHER INFORMATION: Annual regional economic impacts are estimated at over $900 thousand.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $104,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Illinois Waterway (MVR Portion), IL & IN

AUTHORIZATION: Rivers and Harbors Acts 1927 and 1930

LOCATION AND DESCRIPTION: The project includes a total of 268 river miles of 9-foot commercial navigation channel from Chicago to LaGrange Lock and Dam, near Beardstown, IL with eight locks and seven dams. Recreation facilities include a visitor center at Starved Rock Lock and Dam.

FISCAL YEAR 2018 ALLOCATION: $50,152,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including repair Peoria sheet pile wall, install safety guard rails, repair Peoria Base electrical components, and install bulkhead recesses at Marseilles.

FISCAL YEAR 2019 ALLOCATION: $72,543,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including dredging; lock and dam repairs at multiple sites; pump station repairs; maintenance of the LaGrange Lock and Dam electrical, mechanical, and bubbler systems.

BUDGETED AMOUNT FOR FY 2020: M: $61,201,000 **O:** $17,767,000 **T:** $78,968,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $78,409,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging; Major Maintenance at LaGrange L/D, installation of bulkhead recesses at both Brandon Road and Dresden Island L/Ds, and procure miter gates for Brandon Road and Dresden Island L/Ds ($58,702,000).

FRM: N/A

RC: $425,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $134,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $290,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Illinois Waterway (MVS Portion), IL & IN

AUTHORIZATION: Rivers and Harbors Acts of 1927 and 1930

LOCATION AND DESCRIPTION: The portion of the Illinois Waterway within the boundaries of the St. Louis District extends from the mouth of the Illinois River at Grafton, Illinois to the tail water of LaGrange Lock and Dam at mile 80.15. The project operates and maintains the nine-foot navigation channel by dredging, channel patrol, water management, environmental compliance, stewardship of 16,000 acres of public lands and waters and river engineering. This is a high use waterway/navigation project.

FISCAL YEAR 2018 ALLOCATION: $1,948,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M), dredging and channel maintenance, and replacement of water management data equipment.

FISCAL YEAR 2019 ALLOCATION: $2,039,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dredging of the main channel.

BUDGETED AMOUNT FOR FY 2020: M: $1,469,000 **O:** $596,000 **T:** $2,065,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,881,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging ($1,350,000).

FRM: N/A

RC: N/A

H: N/A

EN: $184,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The Illinois Waterway accounts for approximately 50 percent of the commercial commodity tonnage shipped south through St. Louis Harbor. The lower Illinois River project lands and waters contain important Federal and State managed wildlife areas and heavily utilized recreational features. This area includes approximately 16,000 acres of land, six state conservation areas, and one state park.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $115,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Kaskaskia River Navigation, IL

AUTHORIZATION: Rivers and Harbors Act of 1962, Section 101; Water Resources Development Act (WRDA) of 1996, Section 321, Public Law (PL) 104-303; WRDA of 2000, Section 311, PL 106-541.

LOCATION AND DESCRIPTION: The project is located in south-central Illinois and empties into the Mississippi River 118 miles above the Ohio River. The project consists of a 36-mile navigation channel; a 600–foot lock; a dam with gated spillway; 3,000 acres of fee and easement lands; 6,000 acres of flowage easement; three barge terminals; two marinas; four major recreation areas with boat ramps; and numerous minor access points. Authorized purposes are navigation, recreation, fish and wildlife, and habitat restoration. This is a low use waterway/navigation project and safe harbor.

FISCAL YEAR 2018 ALLOCATION: $6,840,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M), dredging of the mouth, unwatering of the lock for inspection and repairs, repair of critical scour in the upstream part of the dam, maintenance of the relief and drainage system, and repair of the dam bulkhead hoisting equipment completed.

FISCAL YEAR 2019 ALLOCATION: $2,308,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dredging.

BUDGETED AMOUNT FOR FY 2020: M: $549,000 **O:** $1,679,000 **T:** $2,228,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,860,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging to less than authorized channel width at the mouth to support current levels of service for existing traffic levels ($325,000).

FRM: N/A

RC: $218,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $150,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Commercial tonnage through lock continues upward with 1.4 million in FY 2018.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,625,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lake Shelbyville, IL

AUTHORIZATION: Flood Control Acts of 1944 and 1958

LOCATION AND DESCRIPTION: The project is located in Shelby and Moultrie counties and provides flood control, water supply, recreation, conservation of fish and wildlife, and water quality control and augments navigation flows downstream on the Kaskaskia River.

FISCAL YEAR 2018 ALLOCATION: $8,997,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and implementing recreation efficiencies and improvements.

FISCAL YEAR 2019 ALLOCATION: $6,309,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including painting metal works main dam, digitization of flowage easements for GIS, and replace failing concrete collection ditches.

BUDGETED AMOUNT FOR FY 2020: M: $1,610,000 **O:** $3,551,000 **T:** $5,161,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,119,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including implementation of modern geospatial data and system technologies ($5,000).

RC: $2,415,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $588,000 – Funds will be used for commonly performed O&M work.

WS: $39,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: FY 2017 project visitation was 1.54 million visits.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $724,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mississippi River between Missouri River and Minneapolis (MVR Portion), IL

AUTHORIZATION: Rivers and Harbors Acts 1927 and 1930

LOCATION AND DESCRIPTION: The project consists of a 314 river-mile reach of 9-foot commercial navigation channel from Guttenberg, IA, downstream to Saverton, Missouri. It includes 14 locks and 11 dams at 12 sites from locks 11 through 22. Recreation facilities include 25 public recreation areas and the visitor center located at Lock and Dam (L&D) 15.

FISCAL YEAR 2018 ALLOCATION: $93,303,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) at twelve L&D sites and the project office. Funds were also used for the following non-routine items: dredging, periodic inspections, dam safety, dewater Lock 16, repair L&D 15 dam service bridge, L&D 14 auxiliary bulkhead fabrication, install safety guard rails, phase I Master Plan implementation at LeClaire Base, repair wing dams, and repair L&D 15 lower guide wall.

FISCAL YEAR 2019 ALLOCATION: $70,461,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M at twelve L&D sites and the project office. Funds are also being used for specific work activities including dredging, periodic inspections, dam safety, replacement of miter gate anchorages at Locks 20, 21, 22, replacement of upstream guidewall bullnose at Lock 15, and dewatering Lock 18 for maintenance and installation of lock bulkheads.

BUDGETED AMOUNT FOR FY 2020: M: $21,629,000 **O:** $29,130,000 **T:** $50,759,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $47,167,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging from Lock 11 to 22; planning, survey, and monitoring actions associated with dredge placement sites; actions to acquire and manage real estate associate ($4,570,000).

FRM: N/A

RC: $2,491,500 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $1,100,500 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including resolution of 5 major house/living space encroachments, associated minor encroachments, and trespasses ($100,000).

WS: N/A

OTHER INFORMATION: More than 580 manufacturing facilities, terminals and docks ship and receive goods on the Upper Mississippi River Basin. Annually, the regional project generates an estimated $3 billion of transportation cost savings compared to overland methods. The savings equates to around $24 per ton.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $581,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mississippi River between Missouri River and Minneapolis (MVS Portion), IL

AUTHORIZATION: Rivers and Harbors Act of 1930, as amended by Public Resolution No. 10 (1932).

LOCATION AND DESCRIPTION: The project extends from the mouth of the Missouri River at St. Louis upstream to the tail water of Lock and Dam (L&D) 22. It is a high use waterway/navigation project that includes 105 miles of river, a nine-foot navigation channel via a system of locks and dams; regulating works, dredging, stewardship of 50,000 acres of public lands, compliance, and 46 recreational access areas.

FISCAL YEAR 2018 ALLOCATION: $47,711,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform common O&M work. Funds were also used for non-routine repair work to include on-going work to repair the dam piers and service bridge; to install tainter gate chains and sprockets at Lock and Dam 25; to replace tainter gate motors; to replace bulkhead hoist cranes at Locks 24 and 25; and to replace high mast lights at Lock 25.

FISCAL YEAR 2019 ALLOCATION: $38,914,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including dredging, dike and revetment repairs, complete the EISA 432 audit update at Mel Price, and miter gate anchorage replacement at L&Ds 24, 25, and Mel Price.

BUDGETED AMOUNT FOR FY 2020: M: $17,326,417 **O:** $7,833,000 **T:** $25,159,417 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $23,172,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to include effort to support current levels of service for existing traffic levels, engineering during construction of previously awarded contracts at Lock 24, 25 and Mel Price, and inspections of hydraulic steel structures at Lock 24, 25 and Mel Price ($7,718,000).

FRM: N/A

REC: $1,152,417 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $835,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Total commercial commodities passing through the project in FY 2017 were 61 million tons. FY 2017 project public visitation was 1.4 million visitors.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $468,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Rend Lake, IL

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: The project is located near Benton, Illinois in Franklin and Jefferson Counties. The project provides flood control, water supply, recreation, and conservation of fish and wildlife. The earth dam is located on the Big Muddy River at mile 103.7 and two sub-impoundment dams are located on the upper arms of the lake.

FISCAL YEAR 2018 ALLOCATION: $8,082,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M), completion of high priority dam maintenance (rip rap), update of project master plan and sustainability work package for waterline replacement and improvement of water infrastructure.

FISCAL YEAR 2019 ALLOCATION: $5,652,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including full boundary maintenance.

BUDGETED AMOUNT FOR FY 2020: M: $1,511,000 **O:** $3,622,000 **T:** $5,133,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,285,000 – Funds will be used for commonly performed O&M work.

RC: $2,027,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $652,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including surveying costs to replace missing monuments and correct boundary line issues related to missing monuments and posts ($50,000).

WS: $169,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing a sedimentation study in accordance with the Water Supply Contract with the State of Illinois ($130,000).

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $143,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Brookville Lake, IN

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Brookville Lake is located in Franklin and Union Counties on the East Fork of the Whitewater River about one-half mile above Brookville, IN. The dam is an earthen-fill structure, 181 feet high and 2,800 feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply, and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,207,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,795,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for cleaning relief wells, installing a two-ton jib crane and chain hoist, facility security assessments, updating the Master Plan, and a freshwater mussel survey.

BUDGETED AMOUNT FOR FY 2020: M: $4,495,700 **O:** $1,088,000 **T:** $5,583,700 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $5,145,700 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairing leaking seals on main emergency gates ($110,000), and riprapping upstream side of dam ($3,878,700).

RC: $87,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $343,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including pollinator habitat establishment ($24,000) and a freshwater mussel survey ($5,000).

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $52,800,000 in flood damages since 1973.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $43,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cagles Mill Lake, IN

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Cagles Mill Lake lies in Owen and Putnam Counties in south-central Indiana near Poland, midway between Indianapolis and Terre Haute. The dam is located on Mill Creek, 2.8 miles above its confluence with Big Walnut Creek, forming the Eel River. The dam is earthen- and rock-fill with gate controlled outlet works and uncontrolled open spillway. The structure is 150 feet high and 900 feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,077,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work.

FISCAL YEAR 2019 ALLOCATION: $1,183,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $144,000 **O**: $1,074,000 **T:** $1,218,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,095,000 – Funds will be used for commonly performed O&M work.

RC: $47,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $76,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including threatened and endangered species surveys ($5,000).

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $351,000,000 in flood damages since 1953.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $78,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cecil M. Harden Lake, IN

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Cecil M. Harden Lake is located in west-central Indiana about 50 miles west of Indianapolis and lies in Parke and Putnam Counties near Ferndale. The dam is located on Big Raccoon Creek approximately 33 miles upstream of its confluence with the Wabash River. The dam is constructed from rolled earth with gate controlled outlet works and uncontrolled open spillway and is 119 feet high and 1,860 feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,038,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work.

FISCAL YEAR 2019 ALLOCATION: $1,231,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $171,000 **O:** $1,032,000 **T:** $1,203,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,079,000 – Funds will be used for commonly performed O&M work.

RC: $52,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $72,000 – Funds will be used for commonly performed O&M work.

WS: NA

OTHER INFORMATION: This project is estimated to have prevented a total of $177,500,000 in flood damages since 1960.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $163,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: J. Edward Roush Lake, IN

AUTHORIZATION: Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: J. Edward Roush Lake is located on the Wabash River in northeastern Indiana about 20 miles southwest of Ft. Wayne and 80 miles northeast of Indianapolis. The dam site is at mile 411.4 of the Wabash River and lies in Huntington and Wells Counties, Indiana. The dam is rolled earthen-fill with a concrete center section. The dam contains the emergency spillway with three crest gates and has a Corps operated and maintained levee and pump plant that protects the City of Markle, Indiana approximately seven miles upstream from the dam. The dam is 91-feet high and 6,500-feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,083,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work plus installation of rip rap.

FISCAL YEAR 2019 ALLOCATION: $1,361,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dam safety activities and removing invasive woody vegetation on four acres.

BUDGETED AMOUNT FOR FY 2020: M: $412,000 **O:** $1,454,000 **T:** $1,866,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,417,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($15,000) and installation of a safety railing ($60,000).

RC: $70,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $379,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $379,600,000 in flood damages since 1967.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $458,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mississinewa Lake, IN

AUTHORIZATION: The Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: Mississinewa Lake is located in north central Indiana about seven miles southeast of Peru and 65 miles northeast of Indianapolis. The dam is at mile 7.1 on the Mississinewa River, a tributary of the Wabash River. The project lies in Miami, Wabash, and Grant Counties. The dam is earthen-fill with gate controlled outlet works and uncontrolled open spillway. It is 140-feet high and 8,000-feet long. The project was authorized as a multi-purpose, flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water supply.

FISCAL YEAR 2018 ALLOCATION: $1,103,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,261,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dam safety inspection activities.

BUDGETED AMOUNT FOR FY 2020: M: $865,000 **O:** $1,433,000 **T:** $2,298,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,805,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including retreat channel bank stabilization ($535,000).

RC: $77,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $416,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $590,100,000 in flood damages since 1967.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $49,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Monroe Lake, IN

AUTHORIZATION: Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: Monroe Lake lies mostly in Monroe County with portions in Brown and Jackson Counties in south central Indiana. It combines the North, Middle, and South Forks of Salt Creek. The dam is located about 26 miles from Salt Creek's confluence with the East Fork of the White River and is about 10 miles south of Bloomington. The dam is earthen core and rock shell with gate-controlled outlet works and uncontrolled open spillway. The dam is 93-feet high and 1,350-feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water supply.

FISCAL YEAR 2018 ALLOCATION: $1,137,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work.

FISCAL YEAR 2019 ALLOCATION: $1,360,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dam safety program inspection activities.

BUDGETED AMOUNT FOR FY 2020: M: $301,000 **O:** $1,132,000 **T:** $1,433,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,240,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacement of "J" seals on the maintenance bulkhead ($150,000).

RC: $57,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $128,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $99,600,000 in flood damages since 1965.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $49,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Patoka Lake, IN

AUTHORIZATION: Flood Control Act of 1965 (P.L. 89-298) managed under P.L. 89-72

LOCATION AND DESCRIPTION: Patoka Lake is located 118.3 miles above the mouth of the Patoka River about 13 miles northeast of Jasper and 95 miles south of Indianapolis in southern Indiana. The lake lies in portions of Dubois, Orange, and Crawford Counties in Indiana. The dam is earthen- and rock-fill with gate controlled outlet works and uncontrolled open spillway. The dam is 84 feet high and 1,550 feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,145,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,504,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities, installing piezometers, relining the road culvert, adding slush grout to the tailwater retreat channel, adding shoreline protection to the dike, and cultural resources site monitoring and protection.

BUDGETED AMOUNT FOR FY 2020: M: $314,000 **O:** $1,057,000 **T:** $1,371,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,209,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairs to wet wells in the control tower ($200,000).

RC: $65,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $89,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including cultural resources site monitoring and protection ($10,000).

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $250,200,000 in flood damages since 1978.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $165,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Salamonie Lake, IN

AUTHORIZATION: The Flood Control Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: Salamonie Lake is located 34 miles southwest of Ft. Wayne in Wabash and Huntington Counties in north-central Indiana. The dam is at mile 3.1 on the Salamonie River, a tributary of the Wabash River. The dam is earthen-fill with gate-controlled outlet works and uncontrolled open spillway. It is 133-feet high and 6,100 feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,083,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work.

FISCAL YEAR 2019 ALLOCATION: $1,300,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities.

BUDGETED AMOUNT FOR FY 2020: M: $850,000 **O:** $1,363,00 **T:** $2,213,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,751,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacement of 20 ton hoist in control tower ($580,000).

RC: $84,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $378,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $482.5 million in flood damages since 1967.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $40,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION: Operation and Maintenance. Fiscal Year 2020

PROJECT NAME: Coralville Lake, IA

AUTHORIZATION: Flood Control Act of 1938

LOCATION AND DESCRIPTION: The project is located on the Iowa River, approximately 14 miles north of Iowa City, Iowa, County of Johnson. Coralville Lake is a multiple purpose project providing primary benefits in flood control and low-flow augmentation and secondary benefits in recreation, fish and wildlife management, forest management, and water quality improvement. Conservation pool is 4,900 acres and the flood control pool is 24,800 acres with 475,000 acre-feet of storage.

FISCAL YEAR 2018 ALLOCATION: $9,764,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and to award a contract to repair the Control Tower Concrete and Sill Plate, replace water heaters and shower heads in twelve shower buildings, replace the water line at Sugar Bottom recreation area, repair paving, and conduct routine operation and maintenance of flood reduction, environmental and recreation infrastructure.

FISCAL YEAR 2019 ALLOCATION: $5,718,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities to design and fabricate three emergency bulkheads for each of the gate wells on the exterior of the control house structure, repair paving, and conduct routine operation and maintenance of flood reduction, environmental and recreation infrastructure.

BUDGETED AMOUNT FOR FY 2020: M: $451,000 **O:** $3,996,000 **T:** $4,447,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,881,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to replace the overhead crane cable and sheave ($100,000).

RC: $1,003,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $563,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative damages prevented are more than $606 million. The project includes 25 thousand acres of fee title lands and 11 recreation area sites. Population at risk is 170 thousand.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,362,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Missouri River Fish and Wildlife Recovery, IA, KS, MO, MT, NE, ND & SD

AUTHORIZATION: Water Resource and Development Act (WRDA) 1986 & 1999 and WRDA 2007, Fish and Wildlife Coordination Act of 1958 (P.L. 85-624), and Endangered Species Act of 1973 (P.L. 93-205)

LOCATION AND DESCRIPTION: The Missouri River Recovery Program (MRRP) is a mitigation project that provides habitat features on numerous land tracts to restore native vegetation and includes terrestrial and aquatic features, chutes, and riparian zone on the lower 800 miles of the Missouri River extending from the mouth at St. Louis, Missouri, to River Mile 735 located at Sioux City, Iowa. The project is split between Kansas City and Omaha Districts at River Mile 498 located at Rulo, Nebraska.

FISCAL YEAR 2018 ALLOCATION: $3,387,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $4,781,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $2,275,000 **O:** $2,468,000 **T:** $4,743,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $4,743,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Currently there have been 28 terrestrial sites and 40 shallow water habitat restoration sites completed and transitioned to O&M. In addition to mitigating the adverse environmental effects of the Missouri River Bank Stabilization and Navigation Project (BSNP), Missouri River Recovery Program mitigation project lands provide areas to develop habitat that assists in the recovery of the Federally listed endangered pallid sturgeon and ensures compliance with the U.S. Fish and Wildlife's Biological Opinion on the operation and maintenance of the Missouri River mainstem reservoir system, BSNP, and the Kansas River reservoir system. Mitigation sites also provide extensive benefit to native fish and wildlife populations and opportunities for public use to include hunting, fishing, hiking and wildlife viewing. This work is operation and maintenance of the Missouri River Fish and Wildlife Recovery efforts and is not to negatively impact the Missouri River navigation channel or authorized purposes.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $38,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Missouri River, Sioux City to the Mouth, IA, NE, KS & MO

AUTHORIZATION: Flood Control Acts of 1912 (P.L. 62-241), 1917 (P.L. 64-367), 1925 (P.L. 68-585), 1927 (P.L. 70-560), 1930 (P.L. 73-67), 1935 (P.L. 73-409), 1945 (P.L. 79-14), 1970 (P.L. 91-611)

LOCATION AND DESCRIPTION: The Missouri River Bank Stabilization and Navigation Project (BSNP) extends from the mouth at St. Louis, Missouri, to River Mile 735 at Sioux City, Iowa. It is an open-river-type waterway with sinuous bend-ways without locks or dams that utilizes river flows to establish and provide shallow-draft, low-use commercial transportation through a system of more than 8,000 dike and revetment structures, while minimizing bank erosion and channel meandering. The Project is split between Kansas City and Omaha Districts at River Mile 498 at Rulo, Nebraska.

FISCAL YEAR 2018 ALLOCATION: $8,874,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $13,185,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including a dock barge replacement.

BUDGETED AMOUNT FOR FY 2020: M: $6,504,000 **O:** $4,039,000 **T:** $10,543,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $10,337,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including critical structure maintenance for navigation ($1,560,000).

FRM: N/A

RC: N/A

H: N/A

EN: $206,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The Missouri River, a major tributary of the Mississippi River, has a long history of regional significance. The project estimated tonnage transported (based on local boat report and industry number for 2017 is 6.7 million tons; has 38 boat ramps, 20 city river fronts and/or marinas; and supports recreational boating and fishing along the river. Multiple public and industrial water supplies draw water from the Missouri River including, Kansas City, St. Joseph, Iatan Power Plant and the Callaway Nuclear Power Plants. Furnished potable water exceeds 1.0 million gallons per hour. The Bank Stabilization and Navigation structures support all the authorized purposes of the project by providing public and commercial water supplies, recreation, irrigation, railroads, highways, agriculture and flood protection levees, and flood walls.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $432,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Rathbun Lake, IA

AUTHORIZATION: Flood Control Act of 1954 (P.L. 83-780)

LOCATION AND DESCRIPTION: This multi-purpose project is located on the Chariton River, near Centerville, Iowa, Counties of Wayne, Lucas, Monroe and Appanoose. The project includes an earth-fill dam 10,600 feet long with a crest about 102 feet above the original streambed. The dam has gated outlet works and an uncontrolled chute-type spillway, and total reservoir storage capacity of 570,500 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $2,760,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including replacement of failing corrugated metal pipes, stability analysis report of main embankment and Buck Creek embankment, and repair and replacement of service gate cylinder o-ring seal.

FISCAL YEAR 2019 ALLOCATION: $2,944,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $167,000 **O:** $2,337,000 **T:** $2,504,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,371,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a bridge safety inspection ($9,000).

RC: $914,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $208,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Cumulative flood damages prevented since the project was put into service in 1968 has totaled $294.5 million with an average annual economic benefit of $12.6 million. The project encompasses 34 thousand land acres, 11 thousand water acres with 155 miles of shoreline, and provides 2.5 billion gallons of water annually to approximately 80 thousand customers of the Rathbun Regional Water Association (one of the largest rural water systems in the Country). The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $107,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Red Rock Dam and Lake Red Rock, IA

AUTHORIZATION: Flood Control Act of 1938

LOCATION AND DESCRIPTION: Red Rock Dam is located on the Des Moines River, approximately 40 miles southeast of Des Moines, Iowa, County of Marion. Lake Red Rock is a multiple purpose project providing primary benefits in flood control and low-flow augmentation and secondary benefits in recreation, fish and wildlife management, forest management, and water quality improvement. Conservation pool is 15,250 acres which makes it Iowa's largest lake and the storage volume is 1,436,000 acre-feet at flood pool level.

FISCAL YEAR 2018 ALLOCATION: $7,024,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for non-routine items including foundation protection of Southeast Des Moines Pump Station and mitigation of the effects of the scour hole adjacent to the Southeast Des Moines Levee.

FISCAL YEAR 2019 ALLOCATION: $5,994,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including plans and specifications to repair contract wall and apron, replace two HVAC systems, and to replace deteriorated water lines and add water meters at multiple recreation and campground areas.

BUDGETED AMOUNT FOR FY 2020: M: $708,000 **O:** $4,470,000 **T:** $5,178,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,551,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to install permanent exterior lighting and security cameras to ensure dam safety; development of plans and specifications for construction contract to repair concrete wall and apron ($435,000).

RC: $1,108,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $519,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Population at risk is 136 thousand with $1.391 billion cumulative damages prevented. The project includes 50 thousand acres of fee title lands, and 11 recreation area sites. FY 2017 recreation fee receipts and lease revenues were $478 thousand.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $195,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Saylorville Lake, Iowa

AUTHORIZATION: Flood Control Act of 1958

LOCATION AND DESCRIPTION: The dam is located 11 miles northwest of Des Moines, Iowa, on the Des Moines River, County of Polk. Saylorville Lake is a multiple purpose project providing primary benefits in flood control and low-flow augmentation and secondary benefits in recreation, fish and wildlife management, forest management, and water quality improvement. Conservation pool is 5,950 acres with a storage volume of 586,000 acre-feet at flood pool level.

FISCAL YEAR 2018 ALLOCATION: $19,106,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for the following non-routine items: construct the supplemental Big Creek Pump Station and conduct interim risk reduction measures at the diversion dam, slide gate and stilling basin.

FISCAL YEAR 2019 ALLOCATION: $8,355,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dewatering of outlet works stilling basin to performing inspections, fabricate emergency bulkheads on the main dam control tower, repair degraded stone, and regrade and riprap unprotected slopes.

BUDGETED AMOUNT FOR FY 2020: M: $427,000 **O:** $5,335,000 **T:** $5,762,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,314,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including completion of plans and specifications for emergency bulkhead procurement ($100,000).

RC: $1,789,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $649,000 – Funds will be used for commonly performed O&M work.

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Cumulative damages prevented are estimated at $401 million. The project includes 26 thousand acres of fee title lands and 13 recreation areas. FY 2017 recreation fee receipts and lease revenues were $734 thousand.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,402,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Clinton Lake, KS

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: This multi-purpose project includes an earth-fill dam 9,250 feet long with a crest 114 feet above the original streambed. The reservoir is located on the Wakarusa River, one mile west of Lawrence, Kansas, County of Douglas. Project purposes include flood protection, water supply, recreation, water quality, and fish and wildlife management to the State of Kansas and the region.

FISCAL YEAR 2018 ALLOCATION: $3,625,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for non-routine activities including an operational condition assessment, for dewatering and dam safety inspection, for periodic inspection work, and for sustainability work for a rural water connection.

FISCAL YEAR 2019 ALLOCATION: $2,330,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,447,000 **O:** $2,084,000 **T:** $3,531,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,361,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the inspection and repairs on the Emergency and Service Sluice Gates Hydraulic Steel Structure ($1,000,000) and repair of concrete gutters on downstream abutements ($65,000).

RC: $920,000 – Funds will be used for commonly performed O&M work.

H: N/A

ENS: $242,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1977 has totaled over $2.3 billion with an average annual economic benefit of $15.2 million. The project encompasses 22,245 land acres, and 7,309 water acres providing a reservoir total storage capacity of 411.2 thousand acre-feet of water with 85 miles of shoreline, and supplies 3.1 billion gallons of water per year to City of Lawrence and Rural Water Districts in the State of Kansas. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $80,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Council Grove Lake, KS

AUTHORIZATION: Flood Control Act of 1950

LOCATION AND DESCRIPTION: Council Grove Lake is located 1.5 miles northwest of Council Grove in Morris County, Kansas on the Grand (Neosho) River at river mile 449.5. This is a multi-purpose project authorized for flood control, water supply, water quality control, and recreation. The project has a 6,500 foot long earth fill embankment with an uncontrolled spillway. At conservation pool depth, the lake covers 3,259 acres.

FISCAL YEAR 2018 ALLOCATION: $1,726,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including to purchase a new tilt deck trailer.

FISCAL YEAR 2019 ALLOCATION: $1,364,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $654,000 **O:** $1,529,000 **T:** $2,183,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,145,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including preparing plans and specifications for repairs to the dam embankment ($120,000), preparing plans and specifications to paint the spillway bridge superstructure ($65,000), and preparation of a bridge load rating and crane placement plan ($100,000).

RC: $599,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $424,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including updating the project Master Plan ($300,000).

WS: $15,000 – Funding will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1964, Council Grove Lake is estimated to have prevented $313 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $97,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: El Dorado Lake, KS

AUTHORIZATION: Flood Control Act of 1965

LOCATION AND DESCRIPTION: El Dorado Lake is two miles northeast of the town of El Dorado in Butler County, Kansas. It is located at river mile 114.7 on the Walnut River, a tributary of the Arkansas River. This is a multi-purpose project authorized for flood control, water supply, water quality control, and recreation. The project consists of a 20,850 foot long earth embankment with a spillway. At the conservation pool depth, the lake covers 7,997 acres.

FISCAL YEAR 2018 ALLOCATION: $971,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to replace the electric line to the gate tower.

FISCAL YEAR 2019 ALLOCATION: $731,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $144,000 **O:** $804,000 **T:** $948,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $483,000 – Funds will be used for commonly performed O&M work.

RC: $31,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $419,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including revising the project Master Plan ($300,000).

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1981, El Dorado Lake is estimated to have prevented $379 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $463,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Elk City Lake, KS

AUTHORIZATION: Flood Control Act of 1941

LOCATION AND DESCRIPTION: Elk City Lake is 7 miles east of the town of Elk City in Montgomery County, Kansas located on the Elk River at river mile 8.7. This is a multi-purpose project authorized for flood control, water supply, water quality, recreation, and environmental stewardship. The project consists of a 4,840 foot earth embankment with an uncontrolled spillway, 16 foot conduit, and stilling basin. The outlet works are located near the right abutment and are controlled by two 7 by 16 foot hoist-operated tractor gates. At conservation pool depth the lake covers 4,118 acres.

FISCAL YEAR 2018 ALLOCATION: $1,532,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operations and maintenance (O&M). Funds were also used for specific work activities including repairs to the dam embankment.

FISCAL YEAR 2019 ALLOCATION: $1,021,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $236,000 **O:** $1,272,000 **T:** $1,508,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $822,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including preparation of a bridge load rating and crane placement plan ($100,000).

RC: $215,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $456,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including updating the project Master Plan ($300,000).

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1966, Elk City Lake is estimated to have prevented $626,000,000 in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $533,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fall River Lake, KS

AUTHORIZATION: Flood Control Act of 1941 (P.L. 77-228)

LOCATION AND DESCRIPTION: Fall River Lake is four miles northwest of the town of Fall River in Greenwood County, Kansas located on the Fall River at river mile 54.2. This is a multi-purpose project authorized for flood control, water quality, fish and wildlife, and supplemental water supply. The project consists of a 5,545 foot long earth embankment with a gate-controlled, concrete, gravity ogee weir and 8 tainter gates. At conservation pool depth the lake covers 2,350 acres.

FISCAL YEAR 2018 ALLOCATION: $1,603,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,196,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing a water line and installation of LED lighting in the project office compound.

BUDGETED AMOUNT FOR FY 2020: M: $361,000 **O:** $941,000 **T:** $1,302,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $832,000 – Funds will be used for commonly performed O&M work.

RC: $300,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $170,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Since construction in 1949, Fall River Lake is estimated to have prevented $624 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $566,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hillsdale Lake, KS

AUTHORIZATION: Flood Control Act of 1954 (P.L. 83-780)

LOCATION AND DESCRIPTION: This multi-purpose project includes an earth-fill embankment about 11,600 feet long (including approximately 3,300 feet of dike section) with a crest 100 feet above the original streambed, and reservoir storage capacity of 163,900 acre-feet. It is located approximately twelve miles above the mouth of Big Bull Creek, a tributary of the Marais des Cygnes River and about five miles north of Paola, Kansas, County of Miami.

FISCAL YEAR 2018 ALLOCATION: $1,065,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for non-routine activities including the repair and replacement of inclinometers and modifications of the upper lateral support of the emergency gate storage system.

FISCAL YEAR 2019 ALLOCATION: $957,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $83,000 **O:** $1,139,000 **T:** $1,222,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,086,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic assesment ($100,000), a periodic inspection ($100,000), and an operational condition assessment ($20,000).

RC: $41,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $87,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1981 has totaled $66.3 million with an average annual economic benefit of $8.6 million. The project encompasses 13 thousand land acres, 4.6 thousand water acres with 51 miles of shoreline, and the reservoir supplies 1.8 billion gallons of water annually to eleven rural water districts in the region. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $94,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: John Redmond Dam and Reservoir, KS

AUTHORIZATION: Flood Control Act of 1950

LOCATION AND DESCRIPTION: John Redmond Dam and Reservoir is three miles northwest of the City of Burlington in Coffey County, Kansas. It is located on the Grand (Neosho) River at river mile 343.7. This is a multi-purpose project authorized for flood control, water supply, water quality control, recreation, and fish and wildlife. The project consists of a 21,790 foot long earth fill embankment and a gated ogee weir, concrete spillway with 14 tainter gates. At conservation pool depth the lake covers 8,084 acres.

FISCAL YEAR 2018 ALLOCATION: $1,871,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,710,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $380,000 **O:** $1,499,000 **T:** $1,879,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,198,000 – Funds will be used for commonly performed O&M work.

RC: $319,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $347,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1964, John Redmond Dam and Reservoir is estimated to have prevented $1.1 billion in cumulative flood damages. The State of Kansas is working under an approved Section 408 permit to mechanically dredge the reservoir to increase the current water supply for use at the nearby Wolf Creek nuclear plant.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $95,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Kanopolis Lake, KS

AUTHORIZATION: Flood Control Acts of 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: This multi-purpose project includes an earth-fill dam with a crest 121 feet above the original streambed, having a total length of 15,360 feet, including dike sections on the left and right abutments; and reservoir storage capacity of 413,500 acre-feet. The project is located at mile 184 on the Smoky Hill River and eleven miles northwest of Marquette, Kansas, County of Ellsworth.

FISCAL YEAR 2018 ALLOCATION: $3,153,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including repair/paint of trash racks, the replacement of surface water corrugated metal pipes, and replacement of failed frost-free hydrants with standpipes.

FISCAL YEAR 2019 ALLOCATION: $4,102,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repair of trash rack and removal sediment at tower and the replacement of the security maintenance compound perimeter fence.

BUDGETED AMOUNT FOR FY 2020: M: $4,166,000 **O:** $1,633,000 **T:** $5,799,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $5,118,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including silt and rock removal ($4,000,000).

RC: $434,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $214,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary inspection and marking ($21,000).

WS: $33,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a reallocation study ($25,000).

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1947 has totaled $2.8 billion with an average annual economic benefit of $37.9 million. The project encompasses 21 thousand land acres, 3.4 thousand water acres with 41 miles of shoreline, and the reservoir supplies 225.0 million gallons of water annually. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,213,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Marion Lake, KS

AUTHORIZATION: Flood Control Act of 1950

LOCATION AND DESCRIPTION: Marion Lake is three miles northwest of the City of Marion in Marion County, Kansas, and located on the Cottonwood River at river mile 126.7. This is a multi-purpose project authorized for flood control, water supply, water quality, and recreation. The project consists of an 8,375 foot long rolled earth fill embankment with a gate-controlled, concrete gravity ogee weir spillway containing three tainter gates. At conservation pool depth the lake covers 6,210 acres.

FISCAL YEAR 2018 ALLOCATION: $7,073,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including installation of a new CXT restroom at one of the project parks and constructing a new spillway bridge.

FISCAL YEAR 2019 ALLOCATION: $2,291,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of the spillway bridge.

BUDGETED AMOUNT FOR FY 2020: M: $918,000 **O:** $1,372,000 **T:** $2,290,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,091,000 – Funds will be used for commonly performed O&M work.

RC: $720,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $464,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including preparing an update to the project Master Plan ($300,000).

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1968, Marion Lake is estimated to have prevented $527 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,615,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Melvern Lake, KS

AUTHORIZATION: Flood Control Acts of 1954 (P.L. 83-780)

LOCATION AND DESCRIPTION: This multi-purpose project is located eight miles south of Lyndon, Kansas, County of Osage County. An earth-filled dam 9,700 feet long with a crest of 119 feet, the project includes a 6,930 acre lake with 17,248 acres of land surrounding, and reservoir with a storage capacity of 358,600 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $2,567,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including a water reallocation study.

FISCAL YEAR 2019 ALLOCATION: $3,115,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including sustainability work to reduce water consumption and a continuation of a water reallocation study.

BUDGETED AMOUNT FOR FY 2020: M: $602,000 **O:** $2,419,000 **T:** $3,021,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,623,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an operational condition assessment ($20,000), a bridge and underwater inspection ($26,000), a periodic assessment ($100,000), and a periodic inspection ($100,000).

RC: $838,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $252,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary monumentation and rectification for environmental stewardship ($50,000).

WS: $308,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a continuation of a realloction study ($300,000).

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1972 has totaled $394.4 million with an average annual economic benefit of $13.4 million. The project encompasses 23 thousand land acres, 6.9 thousand water acres with 101 miles of shoreline, and the reservoir supplies 275.0 million gallons of water annually to two water districts in the region. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $68,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Milford Lake, KS

AUTHORIZATION: Flood Control Act of 1954 (P.L. 81-780)

LOCATION AND DESCRIPTION: This is a multi-purpose project located on the Republican River about ten miles above the confluence of the Republican and Smoky Hill Rivers, which form the Kansas River; near Fort Riley, Kansas, and about four miles northwest of Junction City, Kansas, Counties of Geary, Dickinson, Clay, and Riley. An earth-fill dam 6,300 feet long with a crest 143 feet above the original streambed, and reservoir storage capacity of 1,131,000 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $2,343,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds are also being used for non-routine activities including repair of a control tower electrical system and the rehabilitation of relief wells and collector ditches.

FISCAL YEAR 2019 ALLOCATION: $2,131,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement and repair of the control tower electrical system.

BUDGETED AMOUNT FOR FY 2020: M: $652,000 **O:** $2,123,000 **T:** $2,775,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,571,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a relief well rejuvenation ($300,000).

RC: $1,044,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $152,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Cumulative flood damages prevented since the project was put into service in 1965 has totaled $2.7 billion with an average annual economic benefit of $64.8 million. The project encompasses 44 thousand land acres, and 15.7 thousand water acres with 163 miles of shoreline. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $65,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operations and Maintenance, Fiscal Year 2020

PROJECT NAME: Pearson-Skubitz Big Hill Lake, KS

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: Pearson-Skubitz Big Hill Lake is 4.5 miles east of the City of Cherryvale in Labette County, Kansas. It is located at river mile 33.3 on Big Hill Creek, a tributary of the Verdigris River. This is a multi-purpose project authorized for flood control, water supply, recreation, and fish and wildlife. The project consists of a rolled earth fill embankment that is 3,902 feet long with a broad crested weir and two drop inlet structures. At conservation pool depth the lake covers 1,240 acres.

FISCAL YEAR 2018 ALLOCATION: $3,761,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including repairing the service gates and associated equipment.

FISCAL YEAR 2019 ALLOCATION: $1,383,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including installation of solar water heaters in some of the recreation areas and installation of LED lighting at the project office.

BUDGETED AMOUNT FOR FY 2020: M: $225,000 **O:** $1,232,000 **T:** $1,457,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $820,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including reparing service gates ($55,000) and boundary line fencing ($25,000).

RC: $597,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $25,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1981, Pearson-Skubitz Big Hill Lake is estimated to have prevented $83 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $447,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Perry Lake, KS

AUTHORIZATION: Flood Control Act of 1954 (P.L. 81-780)

LOCATION AND DESCRIPTION: This multipurpose project is located on the Delaware River, two miles north of Perry, Kansas, County of Jefferson. The project includes an earth-fill dam 7,750 feet long with a crest 121 feet above the original streambed, and reservoir storage capacity of 715,500 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $3,195,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for non-routine activities including replacement of the restroom/shower house at Perry Park, installation of insulation, windows and doors, installation of five piezometers, and re-grade and placement of riprap on downstream outlet channels.

FISCAL YEAR 2019 ALLOCATION: $2,540,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including the re-grade and placement of riprap on downstream outlet channels, boundary maintenance tree/vegetation removal, and roadway chip and seal, crack filling, and rock placement.

BUDGETED AMOUNT FOR FY 2020: M: $574,000 **O:** $2,300,000 **T:** $2,874,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,461,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a bridge inspection ($3,000) and a relief well rejuvenation ($120,000).

RC: $1,151,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $254,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary maintenance tree and vegetation removal ($52,000).

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1967 has totaled $10.3 billion with an average annual economic benefit of $74.7 million. The project encompasses 39 thousand land acres, 11 thousand water acres with 160 miles of shoreline, and provides critical support to the Missouri River during times of flooding and navigation flow support during periods of drought. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $52,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pomona Lake, KS

AUTHORIZATION: Flood Control Act of 1954 (P.L. 83-780)

LOCATION AND DESCRIPTION: This multi-purpose project is located eight miles northwest of Pomona, Kansas, and thirty-four miles upstream from Ottawa, Kansas, County of Osage. An earth-filled dam 7,750 feet long with a crest 119 feet above the original streambed, and a reservoir storage capacity of 239,500 acre-feet. The project includes a 3,865 acre lake with 8,445 acres of land surrounding.

FISCAL YEAR 2018 ALLOCATION: $2,842,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including repainting the service bridge, recreation improvement work for Cedar Park restroom and water facilities, and repair riprap and bedding in outlet.

FISCAL YEAR 2019 ALLOCATION: $2,093,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of permanent operating equipment of a case loader.

BUDGETED AMOUNT FOR FY 2020: M: $448,000 **O:** $2,112,000 **T:** $2,560,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,571,000 – Funds will be used for commonly performed O&M work.

RC: $767,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $205,000 – Funds will be used for commonly performed O&M work.

WS: $17,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Cumulative flood damages prevented since the project was put into service in 1964 has totaled $411.4 million with an average annual economic benefit of $17.1 million. The project encompasses 10.5 thousand land acres, 4 thousand water acres with 52 miles of shoreline, and supplies 55.0 million gallons of water annually for supplemental downstream water quality for the State Water Assurance District. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $180,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Toronto Lake, KS

AUTHORIZATION: Flood Control Act of 1941

LOCATION AND DESCRIPTION: Toronto Lake is four miles southeast of the town of Toronto in Woodson County, Kansas, and located on the Verdigris River at river mile 271.5. This is a multi-purpose project authorized for flood control, water supply, water quality, fish and wildlife, and recreation. The project consists of a rolled impervious and random earth fill embankment that is 4,712 feet long with a gate-controlled, concrete, gravity, ogee weir with eight 40 by 25 foot tainter gates. At conservation pool depth the lake covers 2,660 acres.

FISCAL YEAR 2018 ALLOCATION: $917,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $726,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing concrete spalls and installing a water line to the dam structure.

BUDGETED AMOUNT FOR FY 2020: M: $125,000 **O:** $604,000 **T:** $729,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $594,000 – Funds will be used for commonly performed O&M work.

RC: $23,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $97,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work. .

OTHER INFORMATION: Since construction in 1960, Toronto Lake is estimated to have prevented $671 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $335,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tuttle Creek Lake, KS

AUTHORIZATION: Flood Control Acts of 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 78-645), WRDA 1986 (P.L. 99-662)

LOCATION AND DESCRIPTION: This is a multi-purpose project is located at River Mile 10 on the Big Blue River, six miles North of Manhattan, Kansas, Counties of Riley and Pottawatomie. An earth and rock-fill dam 7,500 feet long with a crest 166 feet above the original streambed, gated outlet works, and gated concrete spillway; and a reservoir storage capacity of 2,141,300 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $4,310,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including replacement of the tainter gate controls, repair of concrete spalls and cracks on spillway piers 1, 3, 4, and 14, a comprehensive Master Plan study, and dam safety relief well rejuvenation work.

FISCAL YEAR 2019 ALLOCATION: $2,462,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including the boundary and easement repairs and replacement of permanent operating equipment of a tandem axle dump truck.

BUDGETED AMOUNT FOR FY 2020: M: $668,000 **O:** $2,043,000 **T:** $2,711,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,101,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection preparation ($20,000), a periodic assessment ($20,000), management of threatened and endangered species ($15,000), and a spillway gate shaft alignment ($350,000).

RC: $433,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $163,000 – Funds will be used for commonly performed O&M work.

WS: $14,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Cumulative flood damages prevented since the project was put into service in 1960 has totaled $12.4 billion with an average annual economic benefit of $129.9 million. The project encompasses 33.6 thousand land acres, 12.4 thousand water acres with 104 miles of shoreline, and provides low-flow supplementation to the Kansas and Big Blue Rivers; navigation supplementation on the Missouri River; and water quality and recreation to the State of Kansas and the region. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,917,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Wilson Lake, KS

AUTHORIZATION: Flood Control Act of 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: This is a multi-purpose project and includes an earth-fill dam 5,600 feet long with a crest 172 feet above the original streambed, with reservoir storage capacity of 766,300 acre-feet. The Project is located on the Saline River, twenty miles East of Russell, Kansas, Counties of Russell and Lincoln.

FISCAL YEAR 2018 ALLOCATION: $1,748,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including relief well rejuvenation.

FISCAL YEAR 2019 ALLOCATION: $2,046,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a compound entrance gate, a comprehensive Master Plan, and replacement of the compound entrance fence.

BUDGETED AMOUNT FOR FY 2020: M: $212,000 **O:** $1,588,000 **T:** $1,800,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,082,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an operational condition assessment ($20,000) and a periodic inspection ($100,000).

RC: $517,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $201,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented since the project was put into service in 1965 has totaled $2.5 billion with an average annual economic benefit of $19.1 million. The project encompasses 21.8 thousand land acres, and 9.2 thousand water acres with 100 miles of shoreline. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $45,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Barkley Dam and Lake Barkley, KY & TN

AUTHORIZATION: River and Harbor Act 1946 (P.L. 79-525), River and Harbor Act 1954 (P.L. 83-780)

LOCATION AND DESCRIPTION: Barkley Dam and Lake Barkley is a high-use waterway located in southwestern Kentucky, approximately 26 miles east of Paducah, KY. The project consists of a 110-foot by 800-foot lock, earth and concrete gravity-type dam, a hydropower plant, and a flood storage reservoir with recreation and environmental stewardship areas. The project is the lower-most dam on the Cumberland River and is connected to Kentucky Lake on the Tennessee River via a canal.

FISCAL YEAR 2018 ALLOCATION: $12,125,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project and replacement of the electrical operating system for the lock and emergency dam.

FISCAL YEAR 2019 ALLOCATION: $18,155,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary surveying and rectification, Cumberland River mile 104 dredging and condition surveys, design and purchase hydropower trash screens, replacement of the electrical operating system for the lock and emergency dam, hydropower forebay debris removal and a water availability study.

BUDGETED AMOUNT FOR FY 2020: M: $1,611,000 **O:** $9,480,000 **T:** $11,091,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $2,559,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: $1,652,000 – Funds will be used for commonly performed O&M work.

H: $3,765,000 – Funds will be used for commonly performed O&M work.

EN: $917,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a shoreline management plan update ($30,000) and operational management plan update ($25,000).

WS: $55,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a water availability study ($30,000).

OTHER INFORMATION: Steady and reliable movement of coal and aggregate is vital to the Tennessee Valley Authority due to limited storage at their fossil fuel power plants. Shippers relying on Barkley Lock realize average annual transportation savings of more than $49,000,000. The hydropower plant generates 690,000 megawatt-hours of energy annually, enough for 58,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $2,143,000 shared between business lines as follows: HYD – 6%, NAV – 68%, and FRM – 26%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $31,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Barren River Lake, KY

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Barren River Lake is located in south-central Kentucky approximately 95 miles south of Louisville and about 16 miles southwest of Glasgow. The dam site is at mile 79.2 on Barren River. The dam is rolled earth and rock-fill, 146 feet high and 3,970 feet long. The lake area lies in Allen and Barren Counties with a small portion located in Monroe County. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply, and water quality. The project covers 10,000 acres at summer pool and 20,150 acres at the maximum flood control pool.

FISCAL YEAR 2018 ALLOCATION: $3,369,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $3,586,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including painting and repair of the control tower bridge and boundary surveys.

BUDGETED AMOUNT FOR FY 2020: M: $1,227,000 **O:** $2,860,000 **T:** $4,087,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,708,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including installing a new liner inside the bypass elbow ($163,000).

RC: $676,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $692,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary surveying and rectification ($300,000), endangered mussel monitoring ($34,000), and mussel surveys ($15,000).

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $206,000,000 in flood damages since 1964.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $309,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Buckhorn Lake, KY

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Buckhorn Lake is located in southeastern Kentucky, 43.3 river miles upstream from Beattyville, where the Middle Fork and the North Fork of the Kentucky River converge. The dam site is 0.5 miles upstream from the community of Buckhorn. The dam is earthen and rock-fill with gate controlled outlet works and a gate controlled spillway. The structure is 160-feet high and 1,020-feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,805,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,058,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $790,000 **O:** $1,509,000 **T:** $2,299,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,552,000 – Funds will be used for commonly performed O&M work.

RC: $432,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $315,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a migratory waterfowl survey ($6,000).

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $76,400,000 in flood damages since 1959.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $40,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Carr Creek Lake, KY

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: Carr Creek Lake is located in the mountainous region of southeastern Kentucky about 12 miles south of Hazard. The dam is located on Carr Fork, 8.8 miles above the confluence with the North Fork of the Kentucky River, approximately 16 miles upstream from Hazard. The entire project lies in Knott County. The dam is rock and earthen-fill, 130 feet high and 720 feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,839,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work. Funds were also used to install efficiency improvements in recreation area restrooms.

FISCAL YEAR 2019 ALLOCATION: $1,850,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $880,000 **O:** $1,542,000 **T:** $2,422,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,609,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections and evaluations ($9,000) and replacement of a corroded and compromised metal culvert pipe ($450,000).

RC: $527,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $238,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including timberland habitat improvement for threatened and endangered bats ($8,000).

WS: $48,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a reallocation study ($40,000).

OTHER INFORMATION: This project is estimated to have prevented a total of $108,000,000 in flood damages since 1976.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $41,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cave Run Lake, KY

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738) and 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Cave Run Lake is located in northeastern Kentucky, about 12 miles south of Morehead. The dam site is at mile 173.6 of the Licking River. The dam is rolled earth and rock-fill with gate controlled outlet works and is 148 feet high and 2,700 feet long. The lake is confined within Bath, Menifee, Morgan, and Rowan Counties and within the proclamation boundary of the Daniel Boone National Forest. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply and water quality.

FISCAL YEAR 2018 ALLOCATION: $964,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work.

FISCAL YEAR 2019 ALLOCATION: $1,143,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including continuation of rip rap replacement in the retreat channel.

BUDGETED AMOUNT FOR FY 2020: M: $255,000 **O:** $1,296,000 **T:** $1,551,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,064,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including installation of new ladder sections in control tower ($32,000) and continuation of rip rap replacement in the retreat channel ($60,000).

RC: $163,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $313,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including developing reservoir eco-curves ($10,000) and a master plan update ($275,000).

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $274,400,000 in flood damages since 1973.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $44,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Dewey Lake, KY

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Dewey Lake is located in Floyd County, KY on Johns Creek of the Levisa Fork, a tributary of the Big Sandy River. It is 5.4 miles above the mouth of Johns Creek and 79.4 miles above the mouth of the Big Sandy River. The project includes operation and maintenance (O&M) of Dewey Lake. The lake is impounded by a rolled earth-fill dam with an uncontrolled spillway. The crest length of the dam is 913 feet. The dam was completed in July of 1949.

FISCAL YEAR 2018 ALLOCATION: $1,901,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $3,862,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including cleaning and painting the emergency gate and lifting beam ($100,000) and refurbishing three sluice gates ($2,000,000).

BUDGETED AMOUNT FOR FY 2020: M: $710,000 **O:** $1,246,000 **T:** $1,956,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,531,000 – Funds will be used for commonly performed O&M work.

RC: $284,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $141,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including completing a Historic Properties Management Plan ($71,000).

WS: N/A

OTHER INFORMATION: The project has prevented over $123,400,000 in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $6,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Falls of the Ohio National Wildlife, KY & IN

AUTHORIZATION: An Act of December 29, 1981 (H.R. 2241, PL 97-137, Title II, 95 Stat 1710) established the 1,000-acre Falls of the Ohio National Wildlife Conservation Area, at a cost not to exceed $300,000. An Act of November 28, 1990 (P.L. 101-640, 101st Cong., 2nd Session) modified PL 97-137 by authorizing an interpretive center at Falls of the Ohio National Wildlife Conservation Area, at an estimated total cost of $3,200,000.

LOCATION AND DESCRIPTION: Falls of the Ohio National Wildlife Conservation Area is located in Clark and Floyd Counties in Indiana and Jefferson County in Kentucky. It consists of the land area in and along the Ohio River in the states of Indiana and Kentucky. The Conservation Area lies along the shoreline of the Ohio River, as well as within the river in areas known as Sand and Shipping port Islands. Existing within the area is part of the Ohio River and the Falls of the Ohio.

FISCAL YEAR 2018 ALLOCATION: $54,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $34,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $17,000 **O:** $12,000 **T:** $29,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: N/A

H: N/A

EN: $29,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The “Falls” is a minomer for this series of rapids. The area contains exposed limestone fossil beds during normal river flows. These fossil beds are the only location in the entire 981 mile length of the Ohio River where bedrock is exposed.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $14,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fishtrap Lake, KY

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Fishtrap Lake is located in Pike County, KY on the Levisa Fork of the Big Sandy River. It is 103.3 miles above the mouth of the Levisa Fork. The project includes operation and maintenance (O&M) of Fishtrap Lake. The lake is impounded by a rolled rock dam with impervious core and a controlled spillway. The top length of the dam is 1,100 feet. The dam was completed in February 1969.

FISCAL YEAR 2018 ALLOCATION: $2,168,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities and to complete a Level One Inventory.

FISCAL YEAR 2019 ALLOCATION: $2,329,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including performing inspection activities, repacking hydraulic cylinders on low flow gates and replacing security fencing.

BUDGETED AMOUNT FOR FY 2020: M: $1,369,000 **O:** $1,350,000 **T:** $2,719,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,365,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity to repair spalling concrete on tainter gate abutments ($550,000).

RC: $291,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $63,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project has prevented over $825,500,000 in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $6,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Grayson Lake, KY

AUTHORIZATION: Section 203 of Flood Control Act of 1960 (P.L. 86-645)

LOCATION AND DESCRIPTION: Grayson Lake is located in Carter County, Kentucky, on the Little Sandy River, 51.2 miles above its mouth. The lake is impounded by an earthen dam with a central impervious core. It has a maximum height of 120 feet and a top length of 1,460 feet. The spillway is an uncontrolled, broad crested, saddle spillway at the left abutment. The dam was completed in 1968.

FISCAL YEAR 2018 ALLOCATION: $1,831,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work, to install solar panels, and to install an inflow monitoring system.

FISCAL YEAR 2019 ALLOCATION: $1,504,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing the sewer line at the project office as a cost savings measure.

BUDGETED AMOUNT FOR FY 2020: M: $653,000 **O:** $1,347,000 **T:** $2,000,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,393,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to repair and replace security fencing ($55,000).

RC: $214,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $102,000 – Funds will be used for commonly performed O&M work.

WS: $291,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity to complete reallocation study ($250,000).

OTHER INFORMATION: The project has prevented over $151,400,000 in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $58,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Green & Barren Rivers, KY

AUTHORIZATION: Rivers & Harbors Appropriation Act of 1888; 1909 Act (P.L. 60-317)

LOCATION AND DESCRIPTION: Six locks and dams on the Green River and one on the Barren River were constructed under the project authority, but only two remain operational for navigation. Green River Lock and Dam Number 1 is a low-use waterway located on the Green River at river mile 9.1 at Spotsville, KY. The project consists of a fixed crest dam and a single 84-foot by 600-foot lock chamber. Green River Lock and Dam Number 2 is located on the Green River at river mile 63.1, at Calhoun, KY. The project consists of a fixed crest dam and a single 84-foot by 600-foot lock chamber.

FISCAL YEAR 2018 ALLOCATION: $3,233,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Additional funds provided for replacement of signage at Dam #2, replacement of electrical wiring at Lock #1, and replacement of the motor control center at both locks.

FISCAL YEAR 2019 ALLOCATION: $2,709,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing dam warning signs at both locks.

BUDGETED AMOUNT FOR FY 2020: M: $1,578,000 **O:** $1,219,000 **T:** $2,797,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $2,767,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an OCA inspection at Green River Lock and Dam 1 & 2 ($24,000) and a lighting upgrade at Green River Lock 2 ($100,000).

FRM: N/A

RC: N/A

H: N/A

EN: $30,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $245,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Green River Lake, KY

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Green River Lake lies in Taylor and Adair Counties in south central Kentucky. It is approximately 90 miles south-southeast of Louisville and about 8 miles south of Campbellsville. The dam site is at mile 305.7 on Green River. The dam is earthen- and rock-fill with gate controlled outlet works and uncontrolled open spillway. The dam and is 143 feet high and 2,350 feet long. The project also includes an earth-filled dike that is 105 feet high and 1,952 feet long. The project also has a visitor's center. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply, and water quality.

FISCAL YEAR 2018 ALLOCATION: $2,870,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $4,801,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing electrical components on the elevator, replacing the multi-level assemblies, repairing baffles and the stilling basin floor, regrading and rocking the upstream dike service road, and grading and installing rip rap in areas of erosion.

BUDGETED AMOUNT FOR FY 2020: M: $906,000 **O:** $2,549,000 **T:** $3,455,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,590,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacing multi-level assemblies ($570,000) and replacing elevator electrical components ($160,000).

RC: $635,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $219,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $184,200,000 in flood damages since 1967.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $52,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Kentucky River, KY

AUTHORIZATION: Rivers and Harbors Act of 1879.

LOCATION AND DESCRIPTION: The project is a low-use waterway located in east central Kentucky and stretches from Beattyville to the confluence with the Ohio River at Carrollton. There are a total of 14 locks and dams related to this project on the Kentucky River. Kentucky Locks numbers 5 through 14 have been transferred from the Corps to the Commonwealth of Kentucky. Kentucky Locks numbers 1 through 4 are leased to the Kentucky River Authority.

FISCAL YEAR 2018 ALLOCATION: $11,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation.

FISCAL YEAR 2019 ALLOCATION: $122,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work.

BUDGETED AMOUNT FOR FY 2020: M: $200,000 **O:** $17,000 **T:** $217,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $217,000 – $200,000 of the funds provided in FY 2020 will be used to dispose of Kentucky Locks 1 through 4 to the Kentucky River Authority, which currently manages locks and dams 5 through 14, per the recommended plan included in the Corps' March 2018 Kentucky Locks and Damns 1, 2, 3, and 4 Disposition Study. $17,000 will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Since the locks are no longer operated by the Corps they are considered excess property.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Laurel River Lake, KY

AUTHORIZATION: Section 203 of the Flood Control Act of 1960 (P.L. 86-645)

LOCATION AND DESCRIPTION: Laurel River Lake is located in the Counties of Laurel and Whitley, approximately nine miles west of Corbin, Kentucky. The project consists of a rock-fill dam, a hydropower plant, and a reservoir with recreation and stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $2,672,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project and for replacement of the existing Supervisory Control and Data Acquisition (SCADA) system.

FISCAL YEAR 2019 ALLOCATION: $2,320,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $399,000 **O:** $2,042,000 **T:** $2,441,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $ 176,000 – Funds will be used for commonly performed O&M work.

H: $1,444,000 – Funds will be used for commonly performed O&M work.

EN: $55,000 – Funds will be used for commonly performed O&M work.

WS: $72,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a second reallocation study ($30,000).

OTHER INFORMATION: The hydropower plant generates 66,000 megawatt-hours of energy annually, enough for 5,500 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $694,000 shared between business lines as follows: HYD – 24% and REC – 76%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $16,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Martins Fork Lake, KY

AUTHORIZATION: Section 201 (a) of the Flood Control Act of 1965 (P.L. 89-298)

LOCATION AND DESCRIPTION: Martins Fork Lake is located at river mile 15.6 of the Martins Fork of the Cumberland River, approximately 13 miles southeast of the town of Harlan, Kentucky. The project consists of a concrete gravity dam and a flood storage reservoir with recreation and stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $1,481,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project and repairs to the stilling basin.

FISCAL YEAR 2019 ALLOCATION: $1,680,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary surveying and rectification, a periodic assessment and a periodic inspection.

BUDGETED AMOUNT FOR FY 2020: M: $472,000 **O:** $1,262,000 **T:** $1,734,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,247,000 – Funds will be used for commonly performed O&M work.

RC: $19,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $466,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000) and boundary surveying and rectification ($150,000).

WS: $2,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented $2,050,000 in damages through FY 2018.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $24,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Middlesboro Cumberland River, KY

AUTHORIZATION: Section 5 of the Flood Control Act of 1936 (P.L. 74-738)

LOCATION AND DESCRIPTION: The project is located at Middlesboro, Kentucky on Yellow Creek, a tributary of the Cumberland River, about 660 miles above its confluence with the Ohio River. The project consists of a canal and levee system about 4 miles in length which diverts Bennett's Fork Creek around the city into Yellow Creek.

FISCAL YEAR 2018 ALLOCATION: $233,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $263,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $85,000 **O:** $188,000 **T:** $273,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $273,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project has prevented $651,946,000 in flood damages through FY 2018.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Nolin Lake, KY

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Nolin Lake is located 12 miles south of Leitchfield, KY and 70 miles south of Louisville in Edmonson, Grayson, and Hart Counties of central Kentucky. The dam site is 7.8 miles above the mouth of the Nolin River, and 9.6 miles upstream from Lock Number 6 on the Green River. The dam is rock-fill and earthen core with gate-controlled outlet works, and an uncontrolled open spillway. The dam is 166 feet high and 980 feet long. The project was authorized as a multi-purpose flood control project with recreation management, environmental stewardship, and water supply activities.

FISCAL YEAR 2018 ALLOCATION: $2,851,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,824,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including flowage easement activities.

BUDGETED AMOUNT FOR FY 2020: M: $550,000 **O:** $2,653,000 **T:** $3,203,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,833,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairing dam screens ($175,000).

RC: $658,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $704,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $131,800,000 in flood damages since 1963.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $43,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ohio River Locks & Dams, KY, IL, IN & OH

AUTHORIZATION: The 1909 Act (P.L. 60-317), Rivers & Harbor Appropriation Action of 1910 (P.L. 61-264)

LOCATION AND DESCRIPTION: This Federal project manages eight locks and dams in the Ohio River starting with Markland at river mile 531.5 and ending with Locks and Dam Number 53 at river mile 962.6. Locks and Dams Numbers 52 and 53 are low-lift wicket dams. Markland, McAlpine, Cannelton, Newburgh, John T. Myers, and Smithland Locks and Dams are modern high-lift projects between 40 and 50 years old.

FISCAL YEAR 2018 ALLOCATION: $57,930,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities and non-routine maintenance including: replacing worn pintle balls, contact blocks, and anchorages at Newburgh L&D; cost savings measures at John T. Myers, Newburgh, and Cannelton Locks and Dams (L&Ds) and the Louisville Repair Station; plans and specifications for upstream and downstream replacement miter gates in the primary chamber at Cannelton L&D; and fabricating replacement upstream gates in the primary chamber at Cannelton L&D.

FISCAL YEAR 2019 ALLOCATION: $70,340,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities; installing the replacement upper miter gate at McAlpine Lock and Dam, North Chamber; repairing tainter gate cable connections at Newburgh Lock and Dam, John T Myers Lock and Dam, and Gates 4 and 6 at Smithland Lock and Dam; repairing the auxiliary chamber culvert valve at Markland L&D; rehabilitating the electrical systems at Markland L&D and John T Myers L&D; fabricating replacement downstream miter gates at Cannelton L&D; installing replacement cylinders at Smithland L&D; replacing the HVAC units at Smithland L&D as a cost savings measure.

BUDGETED AMOUNT FOR FY 2020: M: $37,133,000 **O:** $13,444,000 **T:** $50,577,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $50,509,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection of Cannelton Locks and Dam ($80,000); surveys at Cannelton Locks and Dam ($30,000); installation of lower miter gate at north chamber McAlpine Locks and Dam ($16,550,000); installation of replacement miter gate and culvert valve cylinders at Smithland Locks and Dam ($300,000); periodic inspection of JT Myers Locks and Dam ($80,000); surveys of JT Myers Locks and Dam ($30,000); periodic inspection of Olmsted Locks and Dam ($120,000); surveys of Olmsted Locks and Dam ($30,000); repair of mooring bitt tracks at JT Myers Locks and Dam ($4,800,000); replacement of tainter gate cable connections at JT Myers Locks and Dam ($1,850,000); and replacement of tainter gate cable connections at Smithland Locks and Dam ($1,300,000).

FRM: N/A

RC: N/A

H: N/A

EN: $68,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Some of the highest tonnage on the inland waterways passes through the Louisville District locks with over 90 million tons passing through the lower locks annually. The Olmsted Locks and Dams construction project replaced L&D 52 and L&D 53 in 2018.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $5,241,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ohio River Open Channel Work, KY, IL, IN & OH

AUTHORIZATION: The River and Harbors Act of 1827

LOCATION AND DESCRIPTION: This project consists of the Ohio River channel from Mile 438, at Foster, KY to Mile 981, at Cairo, IL, and is maintained by the Louisville District.

FISCAL YEAR 2018 ALLOCATION: $6,242,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M) dredging including annual channel condition surveys, identify areas that required dredging, updates of navigation charts, and coordination with Federal and State wildlife agencies, U.S. Coast Guard and the towing industry.

FISCAL YEAR 2019 ALLOCATION: $8,063,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance dredging and engineering and design and environmental studies for construction of river dikes at the mouth of the Wabash to reduce future dredging requirements.

BUDGETED AMOUNT FOR FY 2020: M: $6,028,000 **O:** $863,000 **T:** $6,891,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $6,891,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging ($6,028,000) and environmental support to dredging activities ($72,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $86,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Paintsville Lake, KY

AUTHORIZATION: Section 204 of Flood Control Act of 1965 (P.L. 89-298)

LOCATION AND DESCRIPTION: Paintsville Lake is located 7.8 miles above the mouth of Paint Creek about 4 miles west of Paintsville in Johnson County, KY. The lake is impounded by a rock-fill dam with a central impervious core. Its maximum height is 160 feet above the streambed, and the crest length is approximately 1,600 feet with a crest elevation of 757 feet, mean sea level. The dam was completed in 1984.

FISCAL YEAR 2018 ALLOCATION: $1,368,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $1,330,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly O&M activities.

BUDGETED AMOUNT FOR FY 2020: M: $486,000 **O:** $876,000 **T:** $1,362,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,140,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection ($26,000), steel structure inspections ($4,000), and an environmental compliance (ERGO) inspection ($5,000).

RC: $119,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $60,000 – Funds will be used for commonly performed O&M work.

WS: $43,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented over $30,290,000 in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $7,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Rough River Lake, KY

AUTHORIZATION: The Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Rough River Lake is located near the community of Falls of Rough, 20 miles from Leitchfield and 95 miles southwest of Louisville in Breckinridge, Hardin, and Grayson Counties in south-central Kentucky. The dam is located on the Rough River, 89.3 miles above its confluence with the Green River. The dam is rolled, earthen- and rock-fill type, with gate-controlled outlet works. It is 130-feet high and 1,590-feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water supply.

FISCAL YEAR 2018 ALLOCATION: $4,261,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M work. Funds were also used to resolve previously identified encroachments on the flowage easement, to complete the real estate acquisition report, and to initiate implementation of actions identified in the real estate acquisition report once approved.

FISCAL YEAR 2019 ALLOCATION: $3,526,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including project encroachment resolution activities, flowage easement monitoring to include aerial and land monitoring/surveillance of surveyed easements to identify and prevent additional flowage easement encroachments, removing and sealing the valves and all associated pipe penetrations and raw water intakes at the water control tower, real estate activities at the project, and boundary surveying and rectification.

BUDGETED AMOUNT FOR FY 2020: M: $652,000 **O:** $2,752,000 **T:** $3,404,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,036,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including resolution of real estate encroachments ($200,000).

RC: $698,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $659,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $262.8 million in flood damages since 1959.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $882,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Taylorsville Lake, KY

AUTHORIZATION: The Flood Control Act of 1966 (P.L. 89-789) and managed as a P.L. 89-72 project.

LOCATION AND DESCRIPTION: The dam is located 40 miles southeast of Louisville and 4 miles upstream from Taylorsville, KY. It is at mile 60.0 of the Salt River, a tributary of the Ohio River. All fee and easement property is located in Spencer, Nelson, and Anderson Counties. The dam is earthen- and rock-fill with gate controlled outlet works and uncontrolled open spillway. It is 163-feet high and 1,280-feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,092,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,137,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities, movement monument surveys, and pest and invasive species management.

BUDGETED AMOUNT FOR FY 2020: **M**: $231,000 **O**: $935,000 **T**: $1,166,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $959,000 – Funds will be used for commonly performed O&M work.

RC: $82,000 - Funds will be used for commonly performed O&M work

H: N/A

EN: $125,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $116.1 million in flood damages since 1983.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $64,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Wolf Creek Dam, Lake Cumberland, KY

AUTHORIZATION: Section 1 of the River and Harbor Act of 1946 (P.L. 79-525)

LOCATION AND DESCRIPTION: Wolf Creek Dam is located ten miles southwest of Jamestown at mile 460 on the Cumberland River in Russell County, Kentucky. The project consists of an earthen-fill and concrete gravity dam, a hydropower plant, and a flood storage reservoir with recreation and environmental stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $11,393,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project, repairing cable tunnel leakage and repairing monolith leaks.

FISCAL YEAR 2019 ALLOCATION: $10,210,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary surveying and rectification, and a monumentation survey.

BUDGETED AMOUNT FOR FY 2020: M: $1,936,000 **O:** $8,711,000 **T:** $10,647,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $1,636,000 – Funds will be used for commonly performed O&M work.

H: $5,528,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an analysis of hydropower operational data ($25,000).

EN: $645,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary surveying and rectification ($175,000).

WS: $150,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a water supply reallocation study ($100,000).

OTHER INFORMATION: The hydropower plant generates 965 thousand megawatt-hours annually, enough for 80 thousand homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $2,688,000 shared between business lines as follows: HYD – 44% and FRM – 56%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a monumentation survey ($40,000) and a periodic inspection ($70,000).

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $54,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Yatesville Lake, KY

AUTHORIZATION: Section 204 of Flood Control Act of 1965 (P.L. 89-298)

LOCATION AND DESCRIPTION: Yatesville Lake, KY is four miles south of Yatesville and 5 miles west of Louisa in Lawrence County, 18 miles above the mouth of Blaine Creek. The dam was completed in 1991, constructed with rock-fill and a central impervious core, and founded on in-situ overburden. The maximum height is 105 feet and the crest length is 760 feet. The uncontrolled, broad-crested spillway is located one-half mile southeast of the dam.

FISCAL YEAR 2018 ALLOCATION: $1,558,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities and a water supply study.

FISCAL YEAR 2019 ALLOCATION: $1,891,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including inspection activities; repairing, repacking, and resealing hydraulic cylinders; replacing the mobile truck crane; and a water supply reallocation study.

BUDGETED AMOUNT FOR FY 2020: M: $773,000 **O:** $916,000 **T:** $1,689,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,523,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($47,000), cleaning and painting selective withdrawal gates ($165,000), replace sewer lines at maintenance compound ($110,000), and cost saving measures of replacing/installing LED lighting in visitor information center/office, shop and intake ($22,000).

RC: $115,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $51,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project has prevented over $26 million in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $119,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bayou Bodcau Dam and Reservoir, LA

AUTHORIZATION: Flood Control Act of 1938, Flood Control Act of 1936, modified by Act of 1939.

LOCATION AND DESCRIPTION: Bodcau Bayou Dam and Reservoir is located on Bayou Bodcau, a tributary of the Red River. It is a single purpose flood control reservoir. Recreation and natural resource stewardship are important secondary uses of project lands at Bodcau.

FISCAL YEAR 2018 ALLOCATION: $1,497,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and to perform levee slide repairs.

FISCAL YEAR 2019 ALLOCATION: $1,701,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including slide repairs on the dam embankment and conduct seepage study of the dam and environmental activities.

BUDGETED AMOUNT FOR FY 2020: M: $383,000 **O:** $826,000 **T:** $1,209,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $611,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspection surveys and design of outlet works dewatering wells, collector ditch, and drilling plan development ($175,000).

RC: $371,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $227,000 - Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including conducting under the OMP for implementation of the Master Plan including NEPA, inspect boundaries and flowage easement lands in Arkansas ($85,000).

WS: N/A

OTHER INFORMATION: Bayou Bodcau Dam was classified as DSAC III in 2008 as part of the Corps-wide dam safety initiative. The Dam has prevented $70,505,000 in flood damages since it was placed in operation. Project visitation is over 222,000 per year.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $337,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bayou Pierre, LA

AUTHORIZATION: Flood Control Act of 1946

LOCATION AND DESCRIPTION: The project is located in the vicinity of Shreveport, Louisiana. It provides for flood control by channel improvement and enlargement of Ockley Drive Ditch and segments of Bayou Pierre.

FISCAL YEAR 2018 ALLOCATION: $42,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $33,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including herbicide application to control vegetation.

BUDGETED AMOUNT FOR FY 2020: M: $33,000 **O:** $0 **T:** $33,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $33,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to administer herbicide to control the growth of woody vegetation that may reduce water flows within the channel ($10,000).

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Caddo Lake, LA

AUTHORIZATION: Flood Control Act of 1965, PL 89-298, Water Resources Development Act of 1976, Public Law 94-587.

LOCATION AND DESCRIPTION: Caddo Lake is located in Caddo Parish, LA, about 19 miles northwest of Shreveport, LA, just upstream of the confluence of Black and Twelve Mile Bayous. The lake helps to provide upstream storage for Shreveport/Bossier City, LA, the third largest city in Louisiana with a population exceeding 200,000.

FISCAL YEAR 2018 ALLOCATION: $196,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $206,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $61,000 **O:** $157,000 **T:** $218,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $164,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including water control manual update ($25,000).

RC: $54,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The lake has over 33 thousand visitors annually.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Gulf Intracoastal Waterway, LA

AUTHORIZATION: River and Harbor Act of 14 July 1946 and prior Acts

LOCATION AND DESCRIPTION: The Gulf Intracoastal Waterway (GIWW) crosses through all five states that comprise the Gulf of Mexico coastline, connecting Brownsville, Texas in the west to St. Mark, Florida in the east. The GIWW provides a protected passage for barge traffic to move vital commodities along the Gulf Coast.

FISCAL YEAR 2018 ALLOCATION: $26,035,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for dredging, hired labor maintenance and operating expenses on 6 GIWW locks, Calcasieu guidewall, Algiers Lock concrete joint repairs, hydrographic surveys, and to collect and manage data from water level gauges.

FISCAL YEAR 2019 ALLOCATION: $29,983,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work. Funds will also be used for specific work activities including dewatering of Calcasieu Lock along with gate repairs and dredging in the New Orleans Harbor area.

BUDGETED AMOUNT FOR FY 2020: M: $4,513,000 **O:** $11,505,000 **T:** $16,018,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $15,725,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging ($4,500,000).

FRM: $250,000 – Funds will be used for commonly performed O&M work.

RC: $43,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,445,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: J. Bennett Johnston Waterway, LA

AUTHORIZATION: Rivers and Harbors Act of 1968; Water Resources Development Act of 1976; Supplemental Appropriations Act of 1984; Water Resources Development Acts of 1986, 1988, 1990, 1992, 1996; and Energy and Water Development Act of 1994.

LOCATION AND DESCRIPTION: The project is located in central and northwest Louisiana and provides for a 9-foot by 200-foot navigation channel extending about 236 miles from the Mississippi River through Old River and Red River to the vicinity of Shreveport, LA. Five locks and adjacent dams provide a lift of approximately 141 feet. The project also provides for realigning the banks of the Red River from the Mississippi River to Shreveport by means of dredging, cutoffs, and training works and stabilizing its banks by means of revetments, dikes, and other methods. This is a low use waterway.

FISCAL YEAR 2018 ALLOCATION: $12,165,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M). Funds were also used for to repair the markers.

FISCAL YEAR 2019 ALLOCATION: $15,016,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M, Funds are also being used for specific work activities including the dewatering for inspection at Overton Lock and Dam.

BUDGETED AMOUNT FOR FY 2020: M: $590,000 **O:** $7,846,000 **T:** $8,436,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $7,448,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: $966,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $22,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $283,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Wallace Lake, LA

AUTHORIZATION: Flood Control Act of 1936, H.D. 378, 74th Congress

LOCATION AND DESCRIPTION: Wallace Lake is located on Cypress Bayou, a tributary of Bayou Pierre. The primary purpose of the project is flood control with conservation and recreation as other benefits.

FISCAL YEAR 2018 ALLOCATION: $211,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $323,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $77,000 **O:** $190,000 **T:** $267,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $206,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspection surveys ($25,000).

RC: $61,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project has prevented over $40 million in flood damages since it was placed in operation. Annual visitation is in excess of 21 thousand visitors.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $11,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

MARYLAND

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cumberland, MD & Ridgeley, WV

AUTHORIZATION: Flood Control Act of 1936 and the Flood Control Act of 1946 described in House Document Number 101, 73rd Congress, 1st Session

LOCATION AND DESCRIPTION: The project is located in Cumberland, Maryland and Ridgeley, West Virginia. The protective works consist of about 1.6 miles of channel improvements along Wills Creek; 1.7 miles of channel improvement along the North Branch Potomac River; 3 pumping stations; eight pressure conduits; an industrial water-supply dam; reconstruction of a railroad bridge; track relocations; and reconstruction of piers and abutments for three highway bridges. Federal maintenance is provided for the channels of Wills Creek and the North Branch Potomac River. Operation and maintenance of the Federal project is performed by the City Engineering Department of Cumberland under contract with the U.S. Army Corps of Engineers, Baltimore District.

FISCAL YEAR 2018 ALLOCATION: $169,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $199,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $165,000 **O:** $49,000 **T:** $214,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $214,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Operation of the project provides benefit to a population at risk of 10,000. Flood damages prevented through FY 2018 are $39 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $16,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Jennings Randolph Lake, MD & WV

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Jennings Randolph Lake project is located in Garrett County of Maryland, and Mineral County, West Virginia, on the North Branch Potomac River, 7.9 miles upstream of the junction of Savage River with North Branch Potomac River at Bloomington, Maryland. The dam is a rolled earthen- and rock-fill structure with a spillway and with tainter gates along the ridge between the dike and the dam. Outlet works are provided in the right (south) abutment.

FISCAL YEAR 2018 ALLOCATION: $3,663,000

DESCRIPTIONS OF WORK FOR 2018: Funds were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $6,261,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,673,000 **O:** $2,709,000 **T:** $4,382,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,547,000 – Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including an HSS inspection, tainter gate design documentation reports, and tainter gate plans and specs.

RC: $393,000 – Funds are being used for commonly performed O&M work.

H: N/A

EN: $357,000 – Funds are being used for commonly performed O&M work.

WS: $85,000 – Funds are being used for commonly performed O&M work.

OTHER INFORMATION: The project controls a drainage area of 263 square miles with a surface area of 952 acres. The project provides benefit to a population at risk of 90,000. Flood damages prevented through FY 2018 are an estimated $403 million. The Corps operates and maintains six recreation areas, and two recreation areas are operated and maintained by Mineral County and by the Maryland Department of Natural Resources under real estate leases. Forty-five percent of the storage space in the project is allocated for water supply storage, owned by the Washington Suburban Sanitary Commission, District of Columbia, and Fairfax County.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,280,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

MASSACHUSETTS

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Barre Falls Dam, MA

AUTHORIZATION: Authorized by the Flood Control Act of 1941

LOCATION AND DESCRIPTION: Barre Falls Dam is located along the Ware River in the Town of Barre, Massachusetts, about 31.9 miles above the confluence of the Swift River. The dam is located about 13 miles northwest of Worcester, Massachusetts. Barre Falls Dam is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with rock slope protection, 885 feet long with a maximum height of 69 feet; 3 earth-filled dikes with rock and gravel slopes, totaling 3,215 feet in length; an uncontrolled ogee weir spillway, 60 feet wide with a maximum discharge capacity of 16,300 cubic feet per second; and a 9.7-foot diameter horseshoe-shaped outlet conduit with 2 control gates. The reservoir provides flood storage capacity of 24,000 acre-feet to control runoff from its net drainage area of 55 square miles.

FISCAL YEAR 2018 ALLOCATION: $573,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $879,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing the Pine Plains Road Bridge and replace the furnace and fuel tank.

BUDGETED AMOUNT FOR FY 2020: **M:** $359,000 **O:** $781,000 **T:** $1,140,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $959,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($25,000), periodic inspections ($95,000), and update emergency action plan ($27,000).

RC: $53,000 – Provides for commonly performed O&M work.

H: N/A

EN: $128,000 – Provides for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $109.6 million in flood damages since placed in service in 1958.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $31,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Birch Hill Dam, MA

AUTHORIZATION: Authorized by the Flood Control Acts of 1936 and 1938

LOCATION AND DESCRIPTION: Birch Hill Dam is located along the Millers River, 27.3 miles above its junction with the Connecticut River. The dam lies about 1.3 miles east of South Royalston, Massachusetts and 7.5 miles northwest of Gardner, Massachusetts. Birch Hill Dam is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with an impervious core and rock slope protection, 1,400 feet long with a maximum height of 56 feet; an uncontrolled ogee weir spillway, a total of 1,190 feet wide with a maximum discharge capacity of 56,600 cubic feet per second; and four rectangular outlet conduits with eight control gates. The reservoir provides a flood storage capacity of 49,900 acre-feet, to control runoff from its net drainage area of 175 square miles.

FISCAL YEAR 2018 ALLOCATION: $833,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded to conduct an intensive cultural resource survey of the project lands. There is $71,000 in sustainability funding to install a solar array at the project. The cultural survey was completed in FY18 and the solar array design was completed in FY18.

FISCAL YEAR 2019 ALLOCATION: $892,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used to perform specific work activities including required bridge inspections and replacement of boiler.

BUDGETED AMOUNT FOR FY 2020: **M:** $592,000 **O:** $604,000 **T:** $1,196,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,037,000 – Funds will be used for commonly performed O&M work for flood risk management. Funds will also be used for specific work activities including electrical repairs at gate house ($210,000).

RC: $39,000 – Funds will be used for commonly performed O&M work for recreation.

H: N/A

EN: $120,000 – Funds will be used to conduct commonly performed O&M work for environmental stewardship.

WS: N/A

OTHER INFORMATION: Project has prevented $282.3 million in flood damages since placed in service in 1942.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $77,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Buffumville Lake, MA

AUTHORIZATION: The Flood Control Act of 1941

LOCATION AND DESCRIPTION: Buffumville Lake is located along the Little River, 1.3 miles upstream from its confluence with the French River and about 8 miles northeast of Southbridge, Massachusetts. The project is located in the Towns of Oxford and Charlton, Massachusetts. Buffumville Lake is part of a comprehensive system of flood control projects within the Thames River Basin. The project consists of an earth-filled dam with stone slope protection, 3,255 feet long with a maximum height of 66 feet; an earth-filled dike with stone slope protection, a total length of 610 feet and a maximum height of 15 feet; an uncontrolled ogee weir spillway, 220-feet wide with a maximum discharge capacity of 29,800 cubic-feet-per-second; and three rectangular outlet conduits with one control gate. The reservoir provides a flood storage capacity of 12,720 acre-feet to control runoff from its net drainage area of 26.5 square miles.

FISCAL YEAR 2018 ALLOCATION: $924,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded and inflow design flood update and LiDAR surveys were initiated.

FISCAL YEAR 2019 ALLOCATION: $724,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: **M:** $290,000 **O:** $851,000 **T:** $1,141,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $945,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including conducting required periodic inspection ($95,000), update emergency action plan ($27,000), hydraulic steel structure inspection ($30,000) and upgrade electrical services in gate tower and office ($200,000)

RC: $73,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $123,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $225.6 million in flood damages since placed in service in 1958.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $91,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cape Cod Canal, MA 2/

AUTHORIZATION: Rivers and Harbors Acts of 1927, 1935, 1945 and 1958; and amended by the Public Works Administration Program in 1933 and 1935, the Permanent Appropriations Repeal Act of 1934; and the Emergency Relief Program in 1935. The canal was purchased from the Boston, Cape Cod and New York Canal Company in accordance with a contract in 1921.

LOCATION AND DESCRIPTION: Cape Cod Canal is located about 50 miles south of Boston, Massachusetts and extends across a narrow neck of land joining Cape Cod to the mainland. The project provides for a channel 32-feet deep and 540- to 800-feet wide extending about 17.5 miles from deep water in Buzzards Bay to deep water in Cape Cod Bay. The project also includes navigation improvements in East Boat Basin and Onset Bay, and construction of two high-level highway bridges and a vertical lift railroad bridge, which cross the canal.

FISCAL YEAR 2018 ALLOCATION: $2,445,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,510,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $375,000 **O:** $1,696,000 **T:** $2,071,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $1,901,000 **–** Funds will be used for commonly performed O&M work.

H: N/A

EN: $170,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project provides recreation opportunities to an average of 2,951,000 visitors each year and consists of 1,655 fee-owned acres of land.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,333,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Charles River Natural Valley Storage Areas, MA

AUTHORIZATION: The Water Resources Development Act of 1974 (P.L. 93-251)

LOCATION AND DESCRIPTION: The Charles River is located in eastern Massachusetts and extends inland about 80 miles from Boston Harbor southwesterly towards the Massachusetts and Rhode Island state line. The watershed covers approximately 307 square miles and project lands are located in 16 communities. The project provides for Federal acquisition and perpetual protection of 17 crucial natural valley storage areas totaling 8,115 acres in the middle and upper portion of the watershed. These areas provide natural flood storage to minimize the potential of flood losses within the watershed. Land acquisition began in May 1977 and was completed in September 1983.

FISCAL YEAR 2018 ALLOCATION: $349,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $387,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: **M:** $190,000 **O:** $212,000 **T:** $402,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $232,000 – Funds will be used for commonly performed O&M work.

RC: $16,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $154,000 – Funds will be used for commonly performed O&M work

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $6.9 million in flood damages since the project was completed in 1983.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $6,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Conant Brook Dam, MA

AUTHORIZATION: Authorized by the Flood Control Act of 1960

LOCATION AND DESCRIPTION: Conant Brook Dam is located along Conant Brook, a tributary of Chicopee Brook, about two miles southeast of Monson, Massachusetts, in Hampden County. Conant Brook Dam is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with rock slope protection, 1,050-feet long with a maximum height of 85 feet; an earth-filled dike 980 feet in length; an uncontrolled ogee weir spillway, 100-feet wide with a maximum discharge capacity of 10,750 cubic-feet-per-second; and a 36-inch diameter outlet conduit. The reservoir provides a flood storage capacity of 3,740 acre-feet, to control runoff from its net drainage area of 7.8 square miles.

FISCAL YEAR 2018 ALLOCATION: $490,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded to update the utilities at the dam site. This work was completed in FY18.

FISCAL YEAR 2019 ALLOCATION: $363,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including construction of a site for park host/trailer and install water well and septic field.

BUDGETED AMOUNT FOR FY 2020: **M:** $87,000 **O:** $329,000 **T:** $416,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $350,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including adding stone fill to existing erosion rills ($55,000) and hydrographic survey of top of dam and dike ($26,000).

RC: $34,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $32,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $8.7 million in flood damages since placed in service in 1966.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $20,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: East Brimfield Lake, MA

AUTHORIZATION: The Flood Control Act of 1941

LOCATION AND DESCRIPTION: East Brimfield Lake is located along the Quinebaug River, about 64.5 miles upstream from the confluence of the Quinebaug River with the Shetucket River. The Towns of Holland, Sturbridge and Brimfield, Massachusetts are located adjacent to project. The project is part of a comprehensive system of flood control projects within the Thames River Basin. The reservoir provides flood storage capacity of 32,220 acre-feet to control runoff from a drainage area of 67.5 square miles.

FISCAL YEAR 2018 ALLOCATION: $976,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded for dam safety work. A slope protection evaluation was completed, and the installation of additional piezometers in the main dam and the rehabilitation of the old Morse Road Bridge were initiated.

FISCAL YEAR 2019 ALLOCATION: $677,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: **M:** $173,000 **O:** $851,000 **T:** $1,024,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $940,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($10,000), periodic inspections ($95,000), roof replacement gatehouse and generator building ($85,000), update emergency action plan ($27,000), and hydraulic steel structure inspection ($30,000).

RC: $56,000 – Funds will be used for commonly performed O&M work .

H: N/A

EN: $28,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: East Brimfield Lake has prevented an estimated $245.4 million in flood damages since placed in service in 1960.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $163,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hodges Village Dam, MA

AUTHORIZATION: The Flood Control Act of 1941

LOCATION AND DESCRIPTION: Hodges Village Dam is located along the French River, about 15 miles upstream from its confluence with the Quinebaug River in Massachusetts. The project is located in the Town of Oxford, Massachusetts. Hodges Village Dam is part of a comprehensive system of flood control projects within the Thames River Basin. The project consists of an earth-filled dam with a spillway and gate-controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $837,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded to replace the gatehouse roof.

FISCAL YEAR 2019 ALLOCATION: $718,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including update emergency action plan and conduct bridge inspections.

BUDGETED AMOUNT FOR FY 2020: **M:** $243,000 **O:** $978,000 **T:** $1,221,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: $1,072,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($4,000), periodic assessments ($190,000), periodic inspections ($70,000), hydraulic steel structure inspection ($10,000), replace emergency generator and fuel tank ($35,000), replace log boom logs and tile gauge ($60,000) and install security gate and guardrail dam site ($25,000)..

RC: $63,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $86,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $260.8 million in flood damages since placed in service in 1959. The reservoir provides a flood storage capacity of 13,250 acre-feet to control runoff from its net drainage area of 31.1 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $162,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Knightville Dam, MA

AUTHORIZATION: Flood Control Acts of 1936 and 1938

LOCATION AND DESCRIPTION: Knightville Dam is located on the Westfield River, about 27.5 miles above its junction with the Connecticut River and four miles north of Huntington, Massachusetts. Knightville Dam is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with a spillway and a gate-controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $1,043,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to replace worn cable gates, to install new log bloom logs, and to initiate a master plan.

FISCAL YEAR 2019 ALLOCATION: $1,270,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including install weirs at toe wall, conduct service bridge repairs, replace log boom logs, and pest and invasive species management.

BUDGETED AMOUNT FOR FY 2020: **M:** $533,000 **O:** $571,000 **T:** $1,104,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $968,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including rehabilitating emergency gate ($130,000) and replacing windows on dam gatehouse ($105,000).

RC: $52,000 – Funds will be used for commonly performed O&M.

H: N/A

EN: $84,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $701.3 million in flood damages since placed in service in 1941. The project reservoir provides a flood storage capacity of 49,000 acre-feet to control runoff from its net drainage area of 162 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $249,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Littleville Lake, MA

AUTHORIZATION: The Flood Control Act of 1958

LOCATION AND DESCRIPTION: Littleville Lake is located along the Middle Branch of the Westfield River, about one mile above its confluence with the main stem of the Westfield River and two miles north of Huntington, Massachusetts. Littleville Lake is part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with a spillway, a gate-controlled outlet for flood control and gate-controlled outlet for water supply.

FISCAL YEAR 2018 ALLOCATION: $981,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to rebuild the limitorques and to conduct hydraulic analysis of spillway capacity.

FISCAL YEAR 2019 ALLOCATION: $749,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including modifying seepage monitoring system.

BUDGETED AMOUNT FOR FY 2020: **M:** $221,000 **O:** $611,000 **T:** $832,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $695,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($10,000) and inundation map for Saddle Dike ($20,000).

RC: $51,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $82,000 – Funds will be used for commonly performed O&M work.

WS: $4,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented an estimated $244.0 million in flood damages since placed in service in 1965. The project reservoir provides a flood storage capacity of 32,400 acre-feet to control runoff from its net drainage area of 52.3 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $261,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: New Bedford Hurricane Barrier, MA

AUTHORIZATION: The Flood Control Act of 1958 (P.L. 85-500).

LOCATION AND DESCRIPTION: New Bedford Hurricane Barrier is located in Buzzards Bay in southeastern Massachusetts, along the north shore of Clark Cove and at the mouth of New Bedford Harbor. The project is located in the Cities of New Bedford and Fairhaven, Massachusetts. The project consists of an earth-filled dike, which extends 4,500 feet across New Bedford and Fairhaven Harbor in the vicinity of Palmer Island, with a 150-foot wide gate opening to accommodate navigation. The project also includes an earth-filled dike extension, 3,600 feet long, which protects the western waterfront, as well as 5,800 feet of earthen dike to protect Clark Cove and 3,100 feet of earthen dike to protect Fairhaven. The project is operated and maintained by the City of New Bedford, with the exception of the navigation gate, which is operated and maintained by the US Army Corps of Engineers.

FISCAL YEAR 2018 ALLOCATION: $1,259,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including for sector gate steel repairs

FISCAL YEAR 2019 ALLOCATION: $500,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: **M:** $631,000 **O:** $284,000 **T:** $915,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $915,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairing concrete stairs and lighting ($405,000).

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $60.9 million in flood damages since placed in service in 1966.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $457,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tully Lake, MA

AUTHORIZATION: The Flood Control Acts of 1936 and 1938

LOCATION AND DESCRIPTION: Tully Lake is located along the East Branch of the Tully River, about 3.9 miles above its junction with the Millers River. The project is located in Royalston, Massachusetts. Tully Lake is part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with a spillway and gate-controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $1,484,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to complete repairs to the Tully Spillway Bridge and to replace basin and project boilers.

FISCAL YEAR 2019 ALLOCATION: $905,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including bridge inspections, replacing basin and project office heating systems, and replace vinyl siding on three buildings.

BUDGETED AMOUNT FOR FY 2020: **M:** $464,000 **O:** $781,000 **T:** $1,245,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $874,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activates including bridge inspections ($10,000) and electrical repairs at gate house ($125,000).

RC: $82,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including OCA/Recreation peer review ($15,000).

H: N/A

EN: $289,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $88.0 million in flood damages since being placed in service in 1949. The reservoir provides a flood storage capacity of 22.5 thousand acre-feet to control runoff from its net drainage area of 50-square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $75,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: West Hill Dam, MA

AUTHORIZATION: The Flood Control Act of 1944

LOCATION AND DESCRIPTION: West Hill Dam is located along the West River in Massachusetts, three miles above its confluence with the Blackstone River and 2.5 miles northeast of Uxbridge, Massachusetts. West Hill Dam is part of a comprehensive system of flood control projects within the Blackstone River Basin. The project consists of an earth-filled dam with rock slope protection, 2,400-feet long and a maximum height of 48 feet; four earth-filled dikes with rock and gravel slopes, totaling 1,910 feet in length; an ogee weir spillway, 50-feet long with a maximum discharge capacity of 8,900-cubic feet-per-second; and three rectangular outlet conduits.

FISCAL YEAR 2018 ALLOCATION: $823,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to complete access road bridge repairs.

FISCAL YEAR 2019 ALLOCATION: $1,024,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including bride inspections, replacing the gatehouse generator, replacing three sluice gate operators, replacing a backhoe, and initiating a master plan.

BUDGETED AMOUNT FOR FY 2020: M: $116,000 **O:** $810,000 **T:** $926,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $774,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the West Hill Dam Gatehouse Electrical rehabilitation (60,000).

RC: $87,000 **–** Funds will be used for commonly performed O&M work.

H: N/A

EN: $65,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $174.0 million in flood damages since being placed in service in 1961. The reservoir provides a flood storage capacity of 12.4 thousand acre-feet to control runoff from its net drainage area of 27.9 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $36,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Westville Lake, MA

AUTHORIZATION: The Flood Control Act of 1941

LOCATION AND DESCRIPTION: Westville Lake is located along the Quinebaug River, about 56.7 miles upstream from its confluence with the Shetucket River. The project is located in the Towns of Sturbridge and Southbridge, Massachusetts. Westville Lake is part of a comprehensive system of flood control projects within the Thames River Basin. The project consists of an earth-filled dam with stone slope protection, 560-feet long and a maximum height of 78 feet; an uncontrolled ogee weir spillway, 200-feet wide with a maximum discharge capacity of 24,500-cubic feet-per-second; and three rectangular outlet conduits with a control gate.

FISCAL YEAR 2018 ALLOCATION: $969,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to upgrade the electrical distribution system and to conduct road repairs.

FISCAL YEAR 2019 ALLOCATION: $1,040,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including bridge inspections, conducting a bathymetric sediment survey, repairs to Old South Street Bridge, replace the gatehouse roof, and initiating a master plan.

BUDGETED AMOUNT FOR FY 2020: **M:** $252,000 **O:** $1,032,000 **T:** $1,284,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,177,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($15,000), periodic assessments ($170,000), periodic inspections ($140,000), and repairs to Old South Street bridge ($206,000).

RC: $71,000 **–** Funds will be used for commonly performed O&M work.

H: N/A

EN: $36,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The reservoir provides a flood storage capacity of 11.1 thousand acre-feet to control runoff from its net drainage area of 99.5 square miles. Project has prevented an estimated $99.6 million in flood damages since being placed in service in 1962.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $141,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Detroit River, MI 2/

AUTHORIZATION: Rivers and Harbors Act of 1902 (PL57-154), as amended by the Rivers and Harbors Acts of 1905 (PL 58-215), 1907 (PL 59-168), 1910 (PL 61-264), 1913 (PL 62-429), 1919 (65-323), 1930 (PL 71-520), 1935 (PL 74-409), 1937 (PL 75-392), 1945 (PL 79-14), 1946 (PL 79-525), 1950 (PL 81-519), 1960 (PL 86-645), and 1968 (PL 90-483); the Act of 21 March 1956 (PL 84-434); and the Water Resources Development Acts of 1974 (PL 93-251) and 1986 (PL 99-662).

LOCATION AND DESCRIPTION: The Detroit River is one of the Great Lakes connecting channels, flowing south from Lake St. Clair to Lake Erie. A total of 76 miles of Federal channels are maintained, including up-bound and down-bound lanes. It also contains various water level and compensating dikes and structures. This river requires maintenance dredging on a one to two-year cycle. Dredged material is disposed of at the Pointe Mouillee Confined Disposal Facility. The project also requires obstruction removal in the hard bottom channels on an annual basis.

FISCAL YEAR 2018 ALLOCATION: $32,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for maintaining compliance with the National Historic Preservation Act and with the Historic Management Plan.

FISCAL YEAR 2019 ALLOCATION: $311,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work.

BUDGETED AMOUNT FOR FY 2020: **M:** $0 **O:** $34,000 **T:** $34,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: N/A

H: N/A

EN: $34,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $8,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Grand Haven Harbor and Grand River, MI 2/

AUTHORIZATION: Rivers and Harbors Act of 1866, as amended by the Rivers and Harbors Acts of 1880, 1890, 1892, 1930 (PL 71-520), 1937 (PL 75-392), and 1945 (PL 79-14); and the Water Resources Development Act of 1986 (PL 99-662).

LOCATION AND DESCRIPTION: The harbor is located on the east shore of Lake Michigan, 108 miles northeast of Chicago, IL and 23 miles north of Holland, MI at the mouth of the Grand River.

FISCAL YEAR 2018 ALLOCATION: $12,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for maintaining compliance with the National Historic Preservation Act.

FISCAL YEAR 2019 ALLOCATION: $18,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $19,000 **T:** $19,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: N/A

H: N/A

EN: $19,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Grand Have is a harbor of refuge and is home to the U.S. Coast Guard Sector Grand Haven Station.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 into FY 2019 was $4000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Keweenaw Waterway, MI

AUTHORIZATION: Rivers and Harbors Act of 1890, as amended by the Rivers and Harbors Acts of 1910 (PL 61-264), 1919 (PL 65-323), and 1935 (PL 74-409); and the Water Resources Development Act of 1986 (PL 99-662).

LOCATION AND DESCRIPTION: The Keweenaw Waterway is located in the Keweenaw Peninsula of the upper peninsula of Michigan between Keweenaw Bay and Lake Superior. The west, upper entrance is 169 miles east of Duluth, MN and the east, lower entrance is approximately 60 miles west of Marquette, MI. It is a low-use, deep-draft commercial waterway with an authorized depth of 32 feet in the upper entrance channel, 28 feet in the lower entrance channel, and 25 feet in the interior channel. There are over 18 miles of maintained channels and approximately 24,300 feet of structures including breakwaters, piers, and revetments. Portions of the project are leased to State and local entities for recreational uses.

FISCAL YEAR 2018 ALLOCATION: $937,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of recreational facilities and compliance with State and Federal historic preservation requirements.

FISCAL YEAR 2019 ALLOCATION: $262,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used to repair lower entry navigation structures.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $35,000 **T:** $35,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $16,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $19,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $163,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2012 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Sebewaing River, MI

AUTHORIZATION: Rivers and Harbors Act of 1896; and Flood Control Act of 1941 (PL 77-228).

LOCATION AND DESCRIPTION: Sebewaing River is located on Saginaw Bay in the thumb of Michigan on the west shore of Lake Huron, about 20 miles northeast of the mouth of the Saginaw River. It is a low-use, shallow-draft recreational navigation project and a flood and coastal storm damage reduction project. The navigation project has an authorized depth of eight feet with 15,000 feet of maintained Federal channel. The flood and coastal storm damage reduction project includes 11,000 feet of levees and 1,900 feet of floodwalls. The operation and maintenance (O&M) of both the navigation portion and the flood control portion is a Federal responsibility.

FISCAL YEAR 2018 ALLOCATION: $53,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine O&M of the flood control project and support to annual, spring ice-breaking activities required to alleviate ice jams that could cause flooding.

FISCAL YEAR 2019 ALLOCATION: $526,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M of the flood control project, support to annual, spring ice-breaking activities required to alleviate ice jams that could cause flooding, to implement interim risk reduction measures related to levee safety concerns, and for specific work activities including repairs to 150 feet of the failing anchored steel sheet pile wall.

BUDGETED AMOUNT FOR FY 2020: M: $22,000 **O:** $38,000 **T:** $60,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $60,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $8,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: St. Marys River, MI 2/

AUTHORIZATION: Act of 8 Jul 1856, as amended by the Rivers and Harbors Acts of 1870, 1886, 1892, 1902 (PL 57-157), 1905 (PL 58-215), 1907 (PL 59-168), 1909 (PL 60-317), 1912 (PL 62-241), 1915 (PL 63-291), 1922 (PL 67-362), 1927 (PL 69-560), 1930 (PL 71-520), 1935 (PL 74-409), 1945 (PL 79-14), and 1946 (PL 79-525); the Acts of 7 Mar 1942 (PL 77-490), 21 Mar 1956 (PL 84-434), and 9 Jul 1956 (PL 84-663); and the Water Resources Development Acts of 1986 (PL 99-662), 1990 (PL 101-640), 1996 (PL 104-303), 1999 (PL 160-53), and 2007 (PL 110-114).

LOCATION AND DESCRIPTION: St. Marys River is one of the Great Lakes' connecting channels and is 75-miles long. The river flows southeast from the eastern end of Lake Superior into the northern end of Lake Huron along the border between the State of Michigan and the Canadian Province of Ontario. This high-use, deep-draft commercial channel includes 75 miles of maintained channels with depths varying from 27 to 29 feet in the St. Marys River, Lake Superior and Lake Huron approaches. This project also includes two active locks (one 110-foot by 1200-foot chamber and one 80-foot by 800-foot chamber, both with a 21 foot lift), two approach canals, a hydropower plant, and a visitor center.

FISCAL YEAR 2018 ALLOCATION: $7,351,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project visitor center and the Federal hydropower plant. In addition, non-routine funding was used for the maintenance and upgrade of various hydro power plant components (SCADA System, Excitation and Governor Systems, Unit 3A Trash Rack, maintenance platforms & Unit 10 structure and equipment assessment). Funds were also used for maintaining compliance with the National Historic Preservation Act and with the Historic Management Plan

FISCAL YEAR 2019 ALLOCATION: $3,361,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $4,802,100 **O:** $1,715,500 **T:** $6,517,600 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $297,000 – Funds will be used for commonly performed O&M work.

H: $5,832,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work to include replacement of the control room HVAC system ($85,000), repair of concrete spalling of main unit spiral cases ($2,700,000), and repair/refurbishment of the powerhouse crane ($500,000).

EN: $58,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The visitor center and park accommodate an annual visitation in excess of 400 thousand people. The Federal hydropower plant with a 20-megawatt capacity provides all of the power for operation of the Soo Locks complex and supports the base load for the area grid, meeting up to 15-percent of regional power demand. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $330,600 split between business lines as follows: HYD – 10% and REC – 1%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $843,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Big Stone Lake and Whetstone River, MN and SD

AUTHORIZATION: Flood Control Act of 1965; Rivers and Harbors Act of 1965

LOCATION AND DESCRIPTION: The project is on the Minnesota River near Ortonville and Odessa, Minnesota, and Big Stone City, South Dakota, at the outlet of Big Stone Lake and in Big Stone and Lac qui Parle Counties, Minnesota, and Grant County, South Dakota. The authorized project provides for wildlife conservation and development, flood control, and recreation. It also includes a dam on the Minnesota River near Odessa, Minnesota, which has created a conservation pool of 2,800 acres for wildlife purposes. Upstream improvements include construction of bank protection and related work along the lower six mile reach of Whetstone River in South Dakota, modification of the existing dam and silt barrier at the outlet of Big Stone Lake, and channel improvement on the Minnesota River for three miles below the outlet control dam.

FISCAL YEAR 2018 ALLOCATION: $287,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $457,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are being used for specific work activities including a periodic inspection, and several minor maintenance items.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $254,000 **T:** $254,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $254,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Highway 75 Dam at Big Stone Lake project located near Odessa, MN, impounds water on the Minnesota River to form the Big Stone National Wildlife Refuge operated by the US Fish & Wildlife Service. The project provides flood control benefits on the Minnesota River mainstem in conjunction with the Lac qui Parle project downstream and has prevented over $4.1 million in damages since construction.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 into FY 2019 was $17,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Duluth-Superior Harbor, MN & WI 2/

AUTHORIZATION: Rivers and Harbors Act of 1896, as amended by the Rivers and Harbors Acts of 1902 (PL 57-154), 1907 (PL 59-168), 1916 (PL 64-108), 1919 (PL 65-323), 1927 (PL 69-560), 1930 (PL 71-520), and 1960 (PL 86-645); and the Acts of 28 May 1908 (PL 60-153), 16 Jul 1952 (PL 82-568), and 4 Oct 1961 (PL 87-388); and the Water Resource Development Acts of 1974 (PL 93-251) and 1986 (PL 99-662).

LOCATION AND DESCRIPTION: Located on the western end of Lake Superior, Duluth-Superior Harbor is a deep-draft, high-use commercial harbor with over 18 miles of maintained channel. Maintenance dredging is required on an annual basis. Dredged material has historically been placed in the Erie Pier Confined Disposal Facility (CDF) which is near capacity and requires fill management activities to ensure its sustainability. The project also includes over 10,000 feet of structures including breakwaters, piers, revetments. The project also includes the Lake Superior Maritime Museum and Visitor Center.

FISCAL YEAR 2018 ALLOCATION: $689,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project's regional visitor center and the Lake Superior Maritime Museum and Visitor Center, and compliance with State and Federal historic preservation requirements.

FISCAL YEAR 2019 ALLOCATION: $743,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities, including to update the project's Master Plan.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $584,000 **T:** $584,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $516,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $68,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Duluth-Superior Harbor ships and receives over 40 million tons annually, and a loss of two feet of channel depth due to annual shoaling, channel blockages or deteriorated wave climate can result in increased transportation costs up to $13 million annually. The visitor center and park has annual visitation in excess of 1,400,000 and provides educational opportunities related to commercial navigation and overall Corps of Engineers missions.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $309,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project from the Operation and Maintenance account. Cooresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lac qui Parle Lakes, Minnesota River, MN

AUTHORIZATION: Flood Control Act of 1936

LOCATION AND DESCRIPTION: The Lac qui Parle project consists of four water control structures on the Chippewa and Minnesota Rivers and is located near Montevideo, Minnesota. The project lays along Marsh Lake and Lac qui Parle and the Minnesota River between head of Marsh Lake and Granite Falls, Minnesota. The project includes a main dam at the outlet of Lac qui Parle Lakes designed to control the Marsh Lake Reservoir. There is also a dam and diversion channel near Watson, Minnesota designed to divert Chippewa River floodwaters into Lac qui Parle Reservoir.

FISCAL YEAR 2018 ALLOCATION: $855,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for a phase 1 archeological survey and cultural resources/historic properties management plan.

FISCAL YEAR 2019 ALLOCATION: $7,359,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are being used for specific work activities including repairs to dam concrete, and completing several minor maintenance items for repairs to road, spillway, and tainter gate. Sustainability funds are being used for lighting upgrades, installing ground source heat pump, and upgrading building insulation.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $1,239,000 **T:** $1,239,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $874,000 – Funds will be used for commonly performed O&M work.

RC: $58,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $307,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Master Plan update to four Western Flood Control Projects to align project goals & priorities through a watershed based approach ($300,000).

WS: N/A

OTHER INFORMATION: The project provides flood protection for Montevideo and areas downstream on the Minnesota and Chippewa Rivers. Since construction, the project has prevented over $44 million in damages.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 to FY 2019 was $108,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mississippi River between Missouri River and Minneapolis (MVP Portion), MN

AUTHORIZATION: Rivers and Harbors Act of 1930, P.L. 71-520 and Flood Control Act of 1944, P.L. 78-534

LOCATION AND DESCRIPTION: The project extends from Minneapolis, MN to Guttenberg, IA with 244 miles of 9-foot channel for high waterway navigation, 13 locks and dams, and 14 commercial or small boat harbors. The project includes a recreation area at Blackhawk Park located at river mile 670 below La Crosse, WI, and natural resource management for approximately 22,000 acres above normal pool elevation.

FISCAL YEAR 2018 ALLOCATION: $92,450,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including embankment strengthening at structures at Lock and Dam (L&D) 4, guidewall crib and tow haulage rehabilitation at L&D 4 - 6, miter gate replacement at L&D 5A, 8 and 10, sheet pile installation at L&D 5 and 5A, DMMP preparations, and to initiate an update to the master plan.

FISCAL YEAR 2019 ALLOCATION: $72,520,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including lower pool 2 channel improvements, replacement of miter gates at L&D 10, and plans and specifications for dewatering at L&D 4.

BUDGETED AMOUNT FOR FY 2020: M: $27,831,000 **O:** $26,921,000 **T:** $54,752,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $52,470,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including environmental compliance activities that are required to dredge to the current level of performance; dredging related surveys required for current level of performance; Periodic Inspection and Report for Lower St. Anthony Falls Locks and Dams on the Upper Mississippi River Waterway ($15,142,000).

FRM: N/A

RC: $804,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $1,478,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including development of a watershed master plan that will address common Corps natural resource management objectives on the entire Upper Mississippi River ($300,000).

WS: N/A

OTHER INFORMATION: This channel is a primary route for shipping commodities through the Midwest to and from the Gulf of Mexico.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $13,956,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Orwell Lake, MN

AUTHORIZATION: Rivers and Harbors Act of 1950; Flood Control Acts of 1950 and 1944; Fish and Wildlife Coordination Act of 1958

LOCATION AND DESCRIPTION: The Orwell Dam and Lake is located on the Otter Tail River near Fergus Falls, Minnesota. The structure consists of an earth dam and concrete control works with a tainter gate. Most of the land, except for a part at the dam site, has been made available to the Minnesota Department of Natural Resources for wildlife conservation purposes.

FISCAL YEAR 2018 ALLOCATION: $586,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $503,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are being used for specific work activities including replacing metal shrouds for tainter gate, and upgrade water control data instrumentation.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $519,000 **T:** $519,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $424,000 – Funds will be used for commonly performed O&M work.

RC: $55,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $40,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The land base around Orwell Lake is leased to the State of Minnesota and operated as Orwell Wildlife Management area. Operation of Orwell Lake provides flood control benefits downstream on the Otter Tail River and continuing on the Red River of the North after it intersects the Otter Tail in Breckenridge, Minnesota. The damages prevented since construction are estimated at more than $707 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $61,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Red Lake Reservoir, MN

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located 4.5 miles east of the western boundary of the Red Lake Indian Reservation in northwest Minnesota. Red Lake Dam is located at the outlet of lower Red Lake in the northeastern part of Clearwater County, Minnesota. The dam structure controls lake levels on Red Lake and discharges in the Red Lake River which eventually connects with the Red River of the North at East Grand Forks, Minnesota. The small concrete dam was built to restore the marshes for wildlife in the reservation between that dam and a point 3 miles below the outlet of Red Lake, to include alterations of the 1931 existing control stop-log structure built by the Indian Service (Bureau of Indian Affairs) at the outlet of Lower Red Lake. Operation of Red Lake Dam was assumed by the Corps on 1 April 1951.

FISCAL YEAR 2018 ALLOCATION: $179,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $142,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $6,000 **O:** $189,000 **T:** $195,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $169,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $26,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Damages prevented since construction are approximately $21 million. The dam and related structures are located entirely within the Red Lake Indian Reservation and a significant part of the water management executed by this structure is directly related to Tribal coordination and St. Paul District Tribal Trust responsibilities. A feature was added to Red Lake Dam in 2010 to facilitate fish migration back into the lake from the Red Lake River and is operated in coordination with Corps water control by the Red Lake Band.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $9,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Reservoirs at Headwaters of Mississippi River, MN

AUTHORIZATION: Rivers and Harbors Acts of 1880 1882 and 1958; Flood Control Acts of 1944 and 1958; Water Supply Act of 1958, Fish and Wildlife Coordination Act of 1958; Federal Water Pollution Control Act Amendments of 1972

LOCATION AND DESCRIPTION: The Reservoirs at the Headwaters of the Mississippi River project are located in north central Minnesota in Itasca, Beltrami, Hubbard, Aitkin, Cass, and Crow Wing counties. The reservoirs are Winnibigoshish, Leech Lake, Pokegama, Sandy Lake, Pine River, and Gull Lake. The six dams were constructed or re-constructed between 1900 and 1913 for the purpose of aiding navigation by stabilizing water flow in the Mississippi River between St. Paul, Minnesota, and Prairie du Chien, Wisconsin. The project includes six Corps managed campgrounds and several day use areas serving approximately 1.7 million visitors annually.

FISCAL YEAR 2018 ALLOCATION: $5,354,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were used for specific work activities including initiating plans and specifications for Sandy Lake dam rehabilitation, conducting a level 2 inventory of threatened and endangered species on project lands, Gull Lake Dam road instability repairs, and burial mound protection.

FISCAL YEAR 2019 ALLOCATION: $5,192,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are being used for specific work activities including design for future repairs, stop log replacement, energy efficiency improvements, and re-survey and re-mark project boundaries at five of the six project sites.

BUDGETED AMOUNT FOR FY 2020: M: $900,000 **O:** $3,536,000 **T:** $4,436,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,323,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities for initiating plans and specifications to stabilize Gull Lake embankment ($250,000).

RC: $1,439,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $674,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Although they were authorized primarily for navigation, the reservoirs operate to reduce flood stages in the vicinity of Aitkin and to facilitate use of the area for recreational purposes and fish and wildlife conservation. The regulated outflow from the reservoirs contributes to improved water supply, pollution abatement and industrial development. The project has prevented over $62 billion in damages through operation of water control structures since construction. Operations of the Headwaters Lakes support a significant number of Tribal Trust responsibilities in the area with many of the lakes

located on Reservations; and close coordination with tribes, communities and their cultures is part of daily operations.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $557,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: East Fork, Tombigbee River, MS

AUTHORIZATION: Flood Control Acts of 1936, 1938 and 1941

LOCATION AND DESCRIPTION: This 53 mile long flood risk management project is located on the Tombigbee River and its tributaries between the junction of Browns and Mackey's Creeks in Itawamba County, Mississippi to the Monroe County line. This project provides for maintenance of the channel to ensure flood risk management benefits for Itawamba County; conveys water to meet requirements of the US Fish and Wildlife Service for protection of endangered mussels; and ensures the ability to provide water supply for the City of Tupelo.

FISCAL YEAR 2018 ALLOCATION: $282,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance.

FISCAL YEAR 2019 ALLOCATION: $287,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $290,000 **O:** $0 **T:** $290,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $290,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: This project includes overhead clearing and general debris removal from the East Fork of the Tombigbee River and Mackey's Creek in Itawamba County, Mississippi.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $10,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Okatibbee Lake, MS

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Okatibbee Lake is located seven miles northwest of Meridian, Mississippi, at mile 37.7 on the Okatibbee Creek. The project includes a dam, a flood risk management reservoir and several recreation areas.

FISCAL YEAR 2018 ALLOCATION: $2,386,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities included master plan completion, development of Cultural/Historical Resource Property Plan and sustainability work to install HVAC system and purchase of electric vehicles.

FISCAL YEAR 2019 ALLOCATION: $1,723,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including surveys for historic properties plan and cost savings measure to replace HVAC system.

BUDGETED AMOUNT FOR FY 2020: M: $296,000 **O:** $1,420,000 **T:** $1,716,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $900,000 – Funds will be used for commonly performed O&M work.

H: N/A

RC: $684,000 – Funds will be used for commonly performed O&M work.

EN: $124,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Okatibbee Lake Project provides flood damage reduction for areas in Lauderdale/Clark Counties to include Meridian and Enterprise, Mississippi.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $769,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pearl River, MS and LA

AUTHORIZATION: Rivers and Harbors Act of 1935, as modified by Rivers and Harbors Act of 1966

LOCATION AND DESCRIPTION: The project is a navigation channel on the Pearl River that originally extended 58 miles from the mouth of the Pearl River to the mouth of Bogalusa Creek at Bogalusa, LA. The project consisted of three locks and three weirs that provided a channel with minimum depth of 7 feet and a minimum bottom width of 100 feet. The project was placed in a caretaker status in 1995 and has been maintained only for maintenance and safety needs.

FISCAL YEAR 2018 ALLOCATION: $149,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to maintain the project in a caretaker status.

FISCAL YEAR 2019 ALLOCATION: $97,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used to maintain project in a caretaker status.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $140,000 **T:** $140,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $140,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Since the project is in “Caretaker Status”, the structure is left unattended.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Clarence Cannon Dam and Mark Twain Lake, MO

AUTHORIZATION: Flood Control Acts of 1938 and 1962

LOCATION AND DESCRIPTION: The project is located on the Salt River at mile 63 above its confluence with the Mississippi River. This multi-purpose project provides flood risk management, hydropower, water supply, navigation, pollution abatement, fish and wildlife conservation, and recreation.

FISCAL YEAR 2018 ALLOCATION: $7,056,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M); installing replacement station service Motor Control Center and 480 volt distribution system of the power plant electrical system; generating excitation system technical specifications and scope of work for hydroelectric design center; replacing two lift stations in power plant, replacing fish cleaning station, non-routine facility improvements, and upgrading the visitor center exhibits.

FISCAL YEAR 2019 ALLOCATION: $7,097,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including utility cost saving measures Water Valve Replacement and Installation of Low Flow Diaphragms and activities to promote preferred habitat for the Indiana and Gray Bat and eradication of sections of invasive species Autumn Olive and Sericea Lespedeza.

BUDGETED AMOUNT FOR FY 2020: M: $2,123,000 **O:** $4,663,000 **T:** $6,786,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,092,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspection of Clarence Cannon Dam, Re-Regulation Dam and appurtenant structures ($75,000). Inspection of Hydraulic Steel Structures, includes Main Dam and Re-Regulation Dam Tainter Gates ($45,000). Inspection of Clarence Cannon Main Dam Spillway Bridge ($67,000). Inspection of Clarence Cannon Visitor Center Pedestrian Bridge ($10,000). Conducting an emergency action plan exercise ($14,000).

RC: $2,367,000 – Funds will be used for commonly performed O&M work.

H: $1,591,000 – Funds will be used for commonly performed O&M work.

EN: $798,000 – Funds will be used for commonly performed O&M work.

WS: $46,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $892,000 shared between business lines as follows: FRM - 60%, EN - 3%, WS - 7% and REC - 30 %. Funds will be used for commonly performed O&M work. FY 2017 project visitation was 1.56 million visits.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Clearwater Lake, MO

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-685)

LOCATION AND DESCRIPTION: Clearwater Lake is located near Piedmont, Missouri, in Reynolds and Wayne Counties. There are 898 square miles of drainage area above the dam. The primary purpose is flood risk management, but the project also provides environmental and recreation outputs.

FISCAL YEAR 2018 ALLOCATION: $4,305,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including to rehabilitate the bulkhead bridge crane.

FISCAL YEAR 2019 ALLOCATION: $3,703,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including to repair bronze side seals on three service gates and to relocate a group shelter in Webb Creek Park.

BUDGETED AMOUNT FOR FY 2020: M: $891,000 **O:** $2,596,000 **T:** $3,487,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,230,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairing foundation bedrock and right abutment of spillway ($100,000), conducting an erodibility study ($200,000), and periodic inspections of public vehicular and pedestrian bridges ($5,000).

RC: $1,064,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $193,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Clearwater Lake is estimated to have prevented $334 million in flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $122,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Harry S. Truman Dam and Reservoir, MO

AUTHORIZATION: Flood Control Acts of 1938 (P.L. 75-761), 1941(P.L. 77-228), 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: This multi-purpose project includes an earth-fill dam with a crest 114 feet above the original streambed, a tainter gate controlled spillway; and powerhouse with six inclined pump-generating units, with a combined nameplate capacity of 160,000 kilowatts, and reservoir storage capacity and is located one mile West of Warsaw, Missouri. This project provides flood protection, hydropower, water supply, fish and wildlife, and recreation to central Missouri.

FISCAL YEAR 2018 ALLOCATION: $19,421,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including compliance with North American Electric Reliability Corporation (NERC) reliability standard activities, the replacement of a volt regulator, programmable logic controller upgrades, digital governor controller upgrades, replacement of three air handler units, lighting fixtures and soffit insulation, complete a hydrologic adequacy study, installation of waterstops 7/8, and installation of waterstop joint repair 9/10 and 11/12.

FISCAL YEAR 2019 ALLOCATION: $11,522,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $4,377,000 **O:** $6,885,000 **T:** $11,262,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $2,196,000 – Funds will be used for commonly performed O&M work.

H: $5,500,000 – Funds will be used for commonly performed O&M work.

EN: $918,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary inspection and maintenance ($105,000).

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $2,637,000 shared between business lines as follows: HYD – 21%, FRM – 50%, EN – 16%, and REC – 13%. Funds will be used for commonly performed O&M work Funds will also be used for specific work activities including a foundation drain cleaning ($125,000). Project cumulative flood damages prevented since the project was put into service in 1979 has totaled $3.2 billion with an average annual economic benefit of $86.3 million. The project encompasses 164 thousand land acres, and 55.6 thousand water acres with 958 miles of shoreline. The power plant provides approximately 244 million Kilowatt hours (KWH) of energy annually to meet peak power demand periods with six slant axis generator-turbine units. Average annual revenue and energy benefits of the power plant is $41.1 million. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,518,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Little Blue River Lakes, MO

AUTHORIZATION: Flood Control Acts of 1968 (P.L. 90-483)

LOCATION AND DESCRIPTION: Little Blue River Lakes consists of two multipurpose lakes in Kansas City, Missouri, County of Jackson. Blue Springs Lake is located on the East Fork of the Little Blue River about ½ miles south of U.S. Highway 40; and the dam is an earth-fill embankment 2,500 feet long with a crest of 80 feet, and total reservoir storage capacity of 26,600 acre-feet. Longview Lake is located on the main stem at approximately 109th Street; and the dam is an earth-fill embankment 1,900 feet long with a crest of 117 feet, and total reservoir storage capacity of 46,900 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $1,161,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,334,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $63,000 **O:** $1,347,000 **T:** $1,410,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,287,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the emergency drawdown gate hydraulic cylinder repair ($320,000), a bridge inspection ($18,000), and a periodic assessment ($25,000).

RC: $26,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $97,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1984 has totaled $95.7 million with an average annual economic benefit of $31.2 million. The project encompasses 7.5 thousand land acres, and 1.65 thousand water acres with 36 miles of shoreline. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $25,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Long Branch Lake, MO

AUTHORIZATION: Flood Control Acts of 1965 (P.L. 89-298)

LOCATION AND DESCRIPTION: This multi-purpose project is located on the East Fork Little Chariton River in North- central Missouri, about two miles West of Macon, County of Macon. An earth-fill dam 3,800 feet long with a crest 76 feet above the original streambed, and total reservoir storage capacity of 64,500 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $1,665,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including repair and replace tower structural members.

FISCAL YEAR 2019 ALLOCATION: $3,249,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including an emergency gate stem and hydraulic system repair and replacement of a buried collector system.

BUDGETED AMOUNT FOR FY 2020: M: $84,000 **O:** $804,000 **T:** $888,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $684,000 – Funds will be used for commonly performed O&M work.

RC: $47,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $89,000 – Funds will be used for commonly performed O&M work.

WS: $68,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a negotiation letter ($60,000).

OTHER INFORMATION: Cumulative flood damages prevented since the project was put into service in 1979 has totaled $82.9 million with an average annual economic benefit of $7.0 million. The project encompasses 7.7 thousand land acres, and 2.4 thousand water acres with 24 miles of shoreline. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $258,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance. Fiscal Year 2020

PROJECT NAME: Mississippi River between the Ohio & Missouri Rivers (Reg Works), MO & IL

AUTHORIZATION: Rivers and Harbors Acts of 1910, 1927, and 1930 as amended by the Rivers and Harbors Acts of 1945 and 1958.

LOCATION AND DESCRIPTION: Project extends from the mouth of the Ohio River to the Missouri River at the northern boundary of St. Louis, Missouri. It is a high use waterway/navigation project that includes 195 miles of river, a nine-foot navigation channel with a lateral canal and Lock 27 at Chain of Rocks, fixed crest rock dam, six recreational access areas, and stewardship of 10,000 acres of public lands.

FISCAL YEAR 2018 ALLOCATION: $30,749,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M), including Lock 27, Chain of Rocks Canal & Levee, 195 miles of open river to include St. Louis Harbor. Funds were also used for dredging and dike and revetment repairs.

FISCAL YEAR 2019 ALLOCATION: $30,513,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed routine O&M work. Funds are also being used for specific work activities including dredging, dike and revetments repairs, and lock modification and maintenance.

BUDGETED AMOUNT FOR FY 2020: M: $18,047,000 **O:** $6,998,000 **T:** $25,045,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $23,249,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging, dike and revetment repairs, lock modification and maintenance ($12,600,000).

FRM: $804,000 – Funds will be used for commonly performed O&M work.

RC: $386,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $606,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Over 107 million tons of commodities passed through the project in FY 2017. The Chain of Rocks levee protects over 250 thousand people and $4.5 billion in economic value. FY 2017 project public visitation was over 187 thousand visitors.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,544,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pomme de Terre Lake, MO

AUTHORIZATION: Flood Control Acts of 1938 (P.L. 75-761), 1944 (P.L. 78-534), 1954 (P.L. 83-780)

LOCATION AND DESCRIPTION: This is a multi-purpose project located four miles south of Hermitage and twenty miles north of Bolivar, Missouri, Counties of Hickory and Polk. The project includes an earth and rock-fill dam 4,630 feet long with a dike section on the left abutment, crest of 156 feet, and a reservoir storage capacity of 644,200 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $3,279,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including repair of the emergency gate lifting beam; phase II of the water reallocation study; and sustainability work for installation of lighting sensors in the project office.

FISCAL YEAR 2019 ALLOCATION: $2,856,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including phase III of the water reallocation study ($300,000).

BUDGETED AMOUNT FOR FY 2020: M: $307,000 **O:** $2,515,000 **T:** $2,822,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,513,000 – Funds will be used for commonly performed O&M work.

RC: $852,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $357,000 – Funds will be used for commonly performed O&M work.

WS: $100,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a completion of a water reallocation study ($100,000).

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1961 has totaled $127.5 million with an average annual economic benefit of $10.7 million. The project encompasses 18 thousand land acres, and 7.8 thousand water acres with 113 miles of shoreline. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $162,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Smithville Lake, MO

AUTHORIZATION: Flood Control Act of 1965 (P.L. 89-298)

LOCATION AND DESCRIPTION: This is a multi-purpose project located about one mile Northeast of Smithville, Missouri, and about five miles North of Kansas City, Missouri, Counties of Clay and Clinton. The project includes an earth-fill dam, 4,200 feet long with a crest 96 feet above the original streambed with dike 2,400 feet long. The dam has gated outlet works and an uncontrolled service spillway, and a total reservoir storage capacity of 241,500 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $1,946,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine maintenance (O&M) work. Funds were also used for specific work activities including replacement of a forced main sewer line, replacement of crane wire ropes, service bridge pier repair work, and cultural resource site archeological excavation work.

FISCAL YEAR 2019 ALLOCATION: $1,740,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a shoreline protection bank stabilization.

BUDGETED AMOUNT FOR FY 2020: M: $1,699,000 **O:** $1,901,000 **T:** $3,600,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,259,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a bridge safety maintenance gutter system ($40,000), a stability analysis ($300,000), a modification of a stilling basin wall drain system ($1,500,000), and a replacement of water-up valves ($30,000).

RC: $108,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $222,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Cumulative flood damages prevented since the project was put into service in 1977 has totaled $1.6 billion with an average annual economic benefit of $18.5 million. The project encompasses 19.7 thousand land acres, and 7.2 thousand water acres with 175 miles of shoreline. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $21,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Stockton Lake, MO

AUTHORIZATION: Flood Control Act of 1954 (Public Law 83-780)

LOCATION AND DESCRIPTION: This multi-purpose project is a rock-shell dam with impervious core 5,100 feet long with a crest 156 feet above the original streambed; a gate-controlled over-fall spillway; a powerhouse with a single generating unit nameplate capacity of 45,200 kilowatts; and reservoir storage capacity of 1,651,000 acre-feet. The Project is located approximately one mile east of Stockton, Missouri, Counties of Cedar, Dade, and Polk.

FISCAL YEAR 2018 ALLOCATION: $6,211,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including hydropower Supervisory, Control and Data Acquisition (SCADA) work, replacement of a water system at Hawker Point South and Orleans Trail Parks, replacement of overhead street lights, replacement of a water system at Crabtree and Ruark Bluff Parks, electric efficiency for eight shower buildings, construction of ten volunteer host sites, and repair work on spillway and apron.

FISCAL YEAR 2019 ALLOCATION: $5,714,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including an install sewage lift station.

BUDGETED AMOUNT FOR FY 2020: M: $1,313,000 **O:** $3,460,000 **T:** $4,773,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $1,270,000 – Funds will be used for commonly performed O&M work.

H: $1,720,000 - Funds will be used for commonly performed O&M work.

EN: $214,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $1,561,000 shared between business lines as follows: HYD – 0.04%, FRM – 69.93%, and REC – 30.03%. Funds will be used for commonly performed O&M work. Cumulative flood damages prevented since the project was put into service in 1970 has totaled $352.9 million with an average annual economic benefit of $17.4 million. The project encompasses 58.8 thousand land acres, and 24.6 thousand water acres with 298 miles of shoreline. The power plant provides approximately 55 million Kilowatt hours (KWH) of energy annually to meet peak power demand periods with a single turbine unit. Average annual revenue and energy benefits of the power plant is $8.3 million. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $674,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Table Rock Lake, MO and AR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-685) as amended by the Flood Control Acts of 1941 (P.L. 77-228) and 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: Table Rock Lake is located in Branson, Missouri, and is one of five multiple-purpose projects within the White River Basin. The authorized purposes are hydropower, flood risk management, and recreation. The project contains four 50-megawatt hydropower generators.

FISCAL YEAR 2018 ALLOCATION: $10,100,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including to replace sluice gate, sump pump, and gallery lighting wiring, and to repair the power plant heating ventilation, and air conditioning.

FISCAL YEAR 2019 ALLOCATION: $10,228,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including to acquire a backhoe for in-house maintenance repairs, replace a skid steer, conduct a power review, complete the Shoreline Management Plan, survey the Cow Creek boundary line, and continue the water supply reallocation study.

BUDGETED AMOUNT FOR FY 2020: M: $3,194,000 **O:** $6,785,000 **T:** $9,979,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,221,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including riprap placement ($110,000).

RC: $2,570,000 – Funds will be used for commonly performed O&M work.

H: $2,968,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including hydropower operational data analysis ($25,000).

EN: $2,050,000 – Funds will be used for commonly performed O&M work.

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Table Rock Lake is estimated to have prevented $295 million in cumulative flood damages since its construction. Hydropower generation in FY 2018 was 421,000 megawatt-hours, enough for 39,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,160,000 shared between business lines as follows: HYD – 73% and FRM – 27%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $457,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fort Peck Dam & Lake, MT

AUTHORIZATION: The Flood Control Act of 1944 (P.L. 78-534) and the Endangered Species Act of 1973 (P.L. 93-205)

LOCATION AND DESCRIPTION: The project is located twenty miles southeast of Glasgow, Montana on Montana Highway 24. Construction began in 1933 and was completed in 1940. The dam is 21,026 feet long and has a maximum height of 250.5 feet. The lake behind the dam measures 134 miles long and a maximum depth of 220 feet. The water at Fort Peck provides benefits of the flood damage reduction, power generation, navigation, fish and wildlife, recreation, irrigation, water supply and water quality.

FISCAL YEAR 2018 ALLOCATION: $5,941,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including modernization of shaft control building cranes and replacement of the waterline to the West End Campground.

FISCAL YEAR 2019 ALLOCATION: $5,479,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including completing a periodic dam safety inspection and assessment; visual inspection of steel bar plates that connect the emergency spillway gate counterweights to the lifting chains; periodic cultural resources artifacts inventories, collection review, and site inspections; and preparation of an interim risk reduction measure plan.

BUDGETED AMOUNT FOR FY 2020: M: $392,000 **O:** $5,352,000 **T:** $5,744,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $1,367,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $771,000 – Funds will be used for commonly performed O&M work.

WS: $9,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $3,597,000 shared between business lines as follows: HYD – 44%, NAV – 24%, and FRM – 32%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including routine bridge inspections ($38,000) and to conduct NDT testing on flood control facilities, stop-logs, and emergency gates ($40,000). Cumulative flood damages prevented through FY 2017 is $14.6 billion. Plant installed generation capacity of 185 megawatts, produced $23.9 million in power production in FY 2017. The project encompasses 388 thousand land acres, 260 thousand water acres with 1,520 miles of shoreline, and has a total reservoir storage capacity of 18.5 million acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $287,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Libby Dam, MT

AUTHORIZATION: Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: Libby Dam and Lake Koocanusa are 17 miles northeast of the city of Libby in Lincoln County and located on the Kootenai River in Montana. Libby Dam is a multi-purpose concrete gravity dam. It is authorized and operated for flood control, power generation, and regulation of stream flow for 16 downstream hydroelectric projects. The powerhouse came on line in 1975 and has five turbines with a total installed capacity of 605-megawatts. Libby Dam is a high-head dam and holds back 90 miles of water in Lake Koocanusa. Forty-eight miles of the reservoir lie within U.S. borders, the other 42 miles are in Canada.

FISCAL YEAR 2018 ALLOCATION: $2,759,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including installation of energy efficient lighting and retrofitting existing ballasts and fixtures.

FISCAL YEAR 2019 ALLOCATION: $2,610,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds will also be used for specific work activities to include NEPA analysis of the Columbia River Basin Operations, sluice gate emergency bulkhead replacement, and left abutment landslide detection equipment.

BUDGETED AMOUNT FOR FY 2020: M: $564,000 **O:** $1,649,000 **T:** $2,213,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $500,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M work of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $218,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $1,495,000 shared between business lines as follows: FRM – 100%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to include NEPA analysis of the Columbia River Basin Operations ($108,000); design for spillway gate and hoist rehab ($76,000); electronic security system ($55,000); design for sluice gate and cylinder rehab ($54,000); and sluice gate controls installation ($5,000). Libby hydropower generators produced 2,557,000 megawatt-hours of electricity in FY 2017, enough for 232,000 homes. Libby Dam project is host to a Blue Ribbon trout fishery and an 18-hole championship disc golf course. It supports four recreation areas and two day use areas that include campgrounds, boat ramps, swim dock, picnicking, playgrounds, trails, interpretation, and a Class B visitor center with displays, restrooms, a theater, and tours.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $554,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Gavins Point Dam, Lewis & Clark Lake, NE and SD

AUTHORIZATION: The Flood Control Act of 1944 (PL 78-534) and the Endangered Species Act of 1973 (PL 93-205)

LOCATION AND DESCRIPTION: Gavins Point Dam is located four miles west of Yankton, South Dakota on Highway 52. Gavins Point Dam construction began in 1952 and was completed in 1956. The dam measures 8,700 feet in length and has a maximum height of 74 feet. Lewis and Clark Lake is 25 miles long, creates 90 miles of shoreline, and has a maximum depth of 45 feet at the dam.

FISCAL YEAR 2018 ALLOCATION: $11,084,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to replace monolith joint waterstops to reduce leakage into the powerhouse, to perform fitness for service analysis for spillway gates, to rehabilitate the potable water distribution system, for an electric vehicle charging station, and to rehabilitate generator fire suppression systems.

FISCAL YEAR 2019 ALLOCATION: $9,986,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including to perform fit-for-service analysis of the project's tainter gates and periodic archeological artifacts inventories review and inspection.

BUDGETED AMOUNT FOR FY 2020: M: $1,861,000 **O:** $8,222,000 **T:** $10,083,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $818,000 – Funds will be used for commonly performed O&M work.

H: $4,323,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including routine bridge inspections ($39,000).

EN: $745,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Master Plan compliance ($174,000).

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $4,187,000 shared between business lines as follows: HYD – 44%, NAV – 24%, and FRM – 32%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a dam survey in support of the 2021 periodic inspection ($50,000). Cumulative flood damages prevented at the project through FY 2017 is $786 million. Plant installed generation capacity of 132 megawatts, produced $22.9 million in power production in FY 2017. The project encompasses 35.4 thousand land acres, 23.7 thousand water acres with 90 miles of shoreline, and has a total reservoir storage capacity of 428 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $275,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Harlan County Lake, NE

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: A multi-purpose project that includes an earth-fill dam with a crest about 107 feet above original streambed; total length of 11,827 feet including a gate-controlled, concrete, gravity-type spillway; and reservoir located in south central Nebraska on the Republican River, 7 miles east of Alma and 60 miles south of Kearney, Nebraska. Project purposes include flood protection, irrigation, recreation, fish and wildlife, and water quality benefits to the south central Nebraska and north central Kansas regions.

FISCAL YEAR 2018 ALLOCATION: $821,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used routine operation and maintenance (O&M) work. Funds were also used for non-routine activities including the rehabilitation of the development of an historical properties plan.

FISCAL YEAR 2019 ALLOCATION: $2,344,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including the replacement of a motor grader.

BUDGETED AMOUNT FOR FY 2020: M: $273,000 **O:** $2,241,000 **T:** $2,514,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,537,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an operational condition assessment ($20,000), a bridge inspection ($25,000), a periodic assessment ($100,000), a periodic inspection ($100,000), and a stilling basin dewatering ($100,000).

RC: $785,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $192,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project cumulative flood damages prevented since the project was put into service in 1953 totals $3.8 billion with an average annual economic benefit of $50.7 million. The project encompasses 30 thousand land acres, 13 thousand water acres with 75 miles of shoreline, and has reservoir storage capacity of 164 thousand acre-feet. Agricultural irrigation is an authorized project purpose with delivery agreements between the Bureau of Reclamation and Bostwick Irrigation District providing water allocations up to 119 thousand acre-feet of water per year to 22.5 thousand acres of land in Nebraska and 42.5 thousand acres in Kansas. The project utilizes volunteers and partnerships to assist with maintenance activities, thereby reducing operation and maintenance expenses.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $384,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Missouri River - Kenslers Bend, NE to Sioux City, IA

AUTHORIZATION: The River and Harbor Act of 1945 (PL 79-14)

LOCATION AND DESCRIPTION: Missouri River Kenslers Bend Project provides operation and maintenance of 15 miles of the Missouri River channel stabilization from Big Sioux Bend near Sioux City, IA to Ponca Bend near Ponca, Nebraska. Project features include dikes, revetments, environmental notches, chevron dikes, L-dikes, sills, kicker dikes, chute closures, water control and water quality responsibilities.

FISCAL YEAR 2018 ALLOCATION: $95,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $46,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $36,000 **O:** $77,000 **T:** $113,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $113,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 totals $244 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Papillion Creek and Tributaries Lakes, NE

AUTHORIZATION: River and Harbor Act of 1968 (PL 90-483) and the Federal Water Project Recreation Act (PL 89-72)

LOCATION AND DESCRIPTION: The Papillion (Papio) Creek Projects consist of Glenn Cunningham, Standing Bear, Zorinsky and Wehrspann Lakes and Dams, all of which are located within the Greater Omaha area. The Corps of Engineers built the dams and developed the initial recreation plan as part of the Papio Creek and Tributaries lakes project. The dams and reservoirs were built to reduce flood damage in the Papio Creek watershed. Recreational opportunities, wildlife habitat and improved water quality are additional benefits derived from the Papios. The Corps cooperates with other agencies to manage and protect the natural resources of these lakes and surrounding lands.

FISCAL YEAR 2018 ALLOCATION: $1,045,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $849,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific activities including drafting a new Master Plan and performing a dam safety survey.

BUDGETED AMOUNT FOR FY 2020: M: $171,000 **O:** $791,000 **T:** $962,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $766,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a dam safety survey ($35,000) and a periodic inspection report ($50,000).

RC: $19,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $177,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including developing a regional Master Plan ($58,000).

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 totals $101.7 million. The Papio Creek Projects encompass 4.2 thousand land acres, 1 thousand water acres with 22 miles of shoreline, and has a total reservoir storage capacity of 40 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $52,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Salt Creek and Tributaries, NE

AUTHORIZATION: The Flood Control Act of 1944 (P.L. 78-534) and the River and Harbor Act of 1958 (P.L. 85-500)

LOCATION AND DESCRIPTION: The Salt Creek and Tributaries Flood Control Project in Nebraska was authorized by the Federal Flood Control Act of 1958 to provide flood damage reduction, water quality, recreation, and fish and wildlife enhancement. The basin drains a 1645 square mile area of southeastern Nebraska, encompassing the City of Lincoln. Salt Creek drains the southern and western part of the basin, while Wahoo Creek drains the northeastern portion. The ten Salt Creek Lakes cover 11,239 acres, of which 4,289 are surface acres of water. The Corps of Engineers leases all but one of its Salt Creek Reservoirs to the State of Nebraska Game and Parks Commission (NGPC). The NGPC refers to these projects as the Salt Valley Lakes. Holmes Lake is leased to the City of Lincoln, Nebraska

FISCAL YEAR 2018 ALLOCATION: $1,567,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,314,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including construct outlet conduit seepage filters at Holmes Lake, Yankee Hill, Twin Lakes, and Bluestem, security risk assessment at all 10 Salt Creek projects, and inundation modeling and mapping for Salt Creek dams.

BUDGETED AMOUNT FOR FY 2020: M: $233,000 **O:** $909,000 **T:** $1,142,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $944,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspections for Sites 2 and 18 ($70,000) and surveys in support of the 2021 periodic inspections ($45,000).

RC: $21,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $177,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 totals $408.4 million. The Salt Creek Projects encompass 10 thousand land acres, 4.3 thousand water acres with 65 miles of shoreline, and has a total reservoir storage capacity of 184 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $147,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Martis Creek Lake, NV & CA

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: The project is 32 miles southwest of Reno. It consists of an earthen-fill dam and reservoir on Martis Creek, a tributary of Truckee River. The project is located in the Counties of Nevada and Placer of California and the County of Washoe of Nevada.

FISCAL YEAR 2018 ALLOCATION: $1,084,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,265,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M and specific activities including accelerograph replacement and drainage system repairs.

BUDGETED AMOUNT FOR FY 2020: M: $293,000 **O:** $1,039,000 **T:** $1,332,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,000,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a Hydraulic Steel Structural Inspection ($40,000).

RC: $199,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $133,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project is currently not fully able to provide the benefits for which it was designed and constructed due to seepage problems and seismic concerns. The Dam Safety Action Classification (DSAC) has changed from DSAC 1 (Very High Urgency) to DSAC 3 (Moderate Urgency). The primary reasons for the DSAC 1 classification were seepage and piping of the foundation or abutment materials and overtopping of the dam during a probable maximum flood event. However, more rigorous risk assessment efforts concluded that the actual observed and predicted seepage gradients and velocities are not anticipated to advance progression of the foundation materials at Martis Creek Dam. The Condition Risk Assessment that was started in 2018 to determine the appropriate remediation efforts is currently on hold. Installation of 7 instruments, a weir and automation of the new instruments is in progress and is expected to be completed in FY 2019.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $168,000. As of the date this justification sheet was prepared, the total unobligated dollars to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pine and Mathews Canyons Dams, NV

AUTHORIZATION: Flood Control Act of 1950

LOCATION AND DESCRIPTION: Pine Canyon Dam is 100 miles northeast of the city of Las Vegas, and Mathews Canyon Dam is 5 miles northeast of Pine Canyon Dam. Both dams are earthen-fill, with spillways, service roads, and reservoirs. There are no recreation facilities.

FISCAL YEAR 2018 ALLOCATION: $383,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $808,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including repair or replacement of security fencing and gates at both dams.

BUDGETED AMOUNT FOR FY 2020: M: $540,000 **O:** $670,000 **T:** $1,210,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,165,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection ($187,000).

RC: N/A

H: N/A

EN: $45,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $10,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Blackwater Dam, NH

AUTHORIZATION: Authorized by the Flood Control Acts of 1936 and 1938

LOCATION AND DESCRIPTION: Blackwater Dam is located along the Blackwater River, about 8.2 miles upstream from its junction with the Contoocook River. The project is located in the Towns of Webster and Salisbury, New Hampshire. Blackwater Dam is operated as part of a comprehensive system of flood control projects within the Merrimack River Basin. The project consists of an earth-filled dam with rock slope protection, 1,650 feet long with a maximum height of 28 feet; an uncontrolled ogee weir spillway, 240 feet wide with a maximum discharge capacity of 32,800 cubic feet per second; and four rectangular outlet conduits with four control gates, one of which is plugged. The reservoir provides a flood storage capacity of 46,000 acre-feet to control runoff from its net drainage area of 128 square miles.

FISCAL YEAR 2018 ALLOCATION: $926,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded and a contract to complete repairs to the flood gate was awarded.

FISCAL YEAR 2019 ALLOCATION: $815,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: **M:** $253,000 **O:** $767,000 **T:** $1,020,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $858,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including resealing downstream training wall ($60,000), hydraulic pump controllers ($40,000), and ROV survey of upstream side of gates ($17,000).

RC: $58,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $104,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $128.3 million in flood damages since placed in service in 1941.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $114,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Edward MacDowell Lake, NH

AUTHORIZATION: Authorized by the Flood Control Acts of 1936 and 1938

LOCATION AND DESCRIPTION: Edward MacDowell Lake is located along Nubanusit Brook, a tributary of the Contoocook River, 31 miles southwest of Concord, New Hampshire. The project is located in the Towns of Peterborough, Hancock, Dublin and Harrisville, New Hampshire. Edward MacDowell Lake is operated as part of a comprehensive system of flood control projects within the Merrimack River Basin.

FISCAL YEAR 2018 ALLOCATION: $838,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition non-routine work was funded to replace a tied gauge and ventilation system, initiate a master plan, and to upgrade the office heating system. This work was completed in FY18.

FISCAL YEAR 2019 ALLOCATION: $725,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including management of archeological and cultural resources.

BUDGETED AMOUNT FOR FY 2020: M: $202,000 **O:** $686,000 **T:** $888,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $719,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including electrical work in gatehouse ($28,000) and replace furnace at gate house ($15,000).

RC: $74,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $95,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $42.9 million in flood damages since placed in service in 1950. The reservoir provides a flood storage capacity of 12,800 acre-feet to control runoff from its net drainage area of 44 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $130,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Franklin Falls Dam, NH

AUTHORIZATION: The Flood Control Acts of 1936 and 1938

LOCATION AND DESCRIPTION: Franklin Falls Dam is located along the Pemigewasset River, about 2.5 miles upstream of Franklin, New Hampshire, in the Towns of Franklin, Hill, Bristol, Sanborton, and New Hampton, New Hampshire. The project is operated as part of a comprehensive system of flood control projects within the Merrimack River Basin. The project consists of an earth-filled dam with a spillway and gate-controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $1,647,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded to replace a log boom, and to upgrade a heating system. This work was completed in FY18.

FISCAL YEAR 2019 ALLOCATION: $1,007,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to conduct a periodic inspection, inspection of 8 bridges, and log boom replacement.

BUDGETED AMOUNT FOR FY 2020: **M:** $505,000 **O:** $652,000 **T:** $1,157,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $966,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including upgrading project office heating system ($20,000), install fall protection in gatehouse ($75,000), and service bridge-southwest fascia repair ($200,000).

RC: $75,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $116,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $514.3 million in flood damages since placed in service in 1943. The Franklin Falls Dam reservoir provides a flood storage capacity of 154,000 acre-feet to control runoff from its net drainage area of 1,000 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $733,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hopkinton-Everett Lakes, NH

AUTHORIZATION: The Flood Control Act of 1938

LOCATION AND DESCRIPTION: Hopkinton Lake is located along the Contoocook River, about 17.3 miles upstream of its junction with the Merrimack River and one-half mile upstream from the Village of West Hopkinton, New Hampshire. Everett Lake is located along the Piscataquog River, about 16 miles upstream of its junction with the Merrimack River and about 1.3 miles southeast of the Village of East Weare, New Hampshire. Hopkinton-Everett Lakes are operated as part of a comprehensive system of flood control projects within the Merrimack River Basin. Hopkinton Lake consists of an earth-filled dam with a spillway and a gate-controlled outlet. Everett Lake consists of an earth-filled dam with a spillway and a gate-controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $2,128,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded to replace crest monuments, to service the limit or que gate operator assembly, for gatehouse repairs and to install piezometers. This work was completed in FY18.

FISCAL YEAR 2019 ALLOCATION: $1,838,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including conduct periodic inspection of the project, conduct required bridge inspections, and concrete and metal repairs.

BUDGETED AMOUNT FOR FY 2020: **M:** $534,000 **O:** $1,481,000 **T:** $2,015,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,570,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including video inspection of conduit (Everett Dam) ($77,000), update emergency action plan ($42,000), hydraulic analysis of BCCMP (Everett Dam) ($7,000), and repainting gates & gate structures & replace hydraulic cylinder packings at Everett ($159,000)..

RC: $186,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $259,000 – Funds will be used for commonly performed O&M work

WS: N/A

OTHER INFORMATION: The project has prevented an estimated $325.4 million in flood damages since placed in service in 1962. Hopkinton-Everett Lakes project provides a total flood storage capacity of 92,500 acre-feet to control runoff from their net drainage areas of 446 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $476,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Otter Brook Lake, NH

AUTHORIZATION: The Flood Control Act of 1954

LOCATION AND DESCRIPTION: Otter Brook Lake is located in Keene, New Hampshire, along Otter Brook, about 4.9 miles upstream from its junction with the Ashuelot River. Otter Brook Lake is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with an impervious core and rock slope protection, 1,288 feet long with a maximum height of 133 feet; an uncontrolled ogee weir spillway, 145-feet wide with a maximum discharge capacity of 40,000-cubic feet-per-second; and a 6-foot diameter horseshoe-shaped outlet conduit with three control gates. The reservoir provides a flood storage capacity of 18,320 acre-feet to control runoff from its net drainage area of 47.2 square miles.

FISCAL YEAR 2018 ALLOCATION: $1,622,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to renovate old operators' quarters, to conduct upgrades to the Garage Warm Bay, and to repair an eroded flank.

FISCAL YEAR 2019 ALLOCATION: $1,381,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including bridge inspections, project office addition, repair borrow area, and evaluate seismic safety of project.

BUDGETED AMOUNT FOR FY 2020: **M:** $328,000 **O:** $571,000 **T:** $899,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $711,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including main electrical panel replacement in gatehouse ($25,000), number one flood gate stem repair in gatehouse ($10,000), and gatehouse roof fall protection railing ($13,000).

RC: $92,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $96,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $107.1 million in flood damages since placed in service in 1958.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $603,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Surry Mountain Lake, NH

AUTHORIZATION: The Flood Control Acts of 1936 (P.L. 74-738) and 1938 (P.L. 75-761).

LOCATION AND DESCRIPTION: Surry Mountain Lake is located along the Ashuelot River, about 34.6 miles upstream from its junction with the Connecticut River and 5 miles north of Keene, New Hampshire. The project is located in the Towns of Surry and Gilsum, New Hampshire. Surry Mountain Lake is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with an uncontrolled spillway and a gated outlet.

FISCAL YEAR 2018 ALLOCATION: $1,179,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to complete repairs to gate 3 and to replace primary electric conductors to gatehouse.

FISCAL YEAR 2019 ALLOCATION: $793,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including an invasive plant survey and reclaiming grassland habitat.

BUDGETED AMOUNT FOR FY 2020: **M:** $332,000 **O:** $600,000 **T:** $932,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: $743,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($10,000), ROV Survey of Upstream side of gates ($30,000), generator replacement ($45,000), and replace office roof ($10,000).

RC: $88,000 **–** Funds will be used for commonly performed O&M work.

H: N/A

EN: $101,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $382.2 million in flood damages since placed in service in 1941. The reservoir provides a flood storage capacity of 33 thousand acre-feet to control runoff from its net drainage area of 100 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $102,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Passaic River Flood Warning Systems, NJ

AUTHORIZATION: The Water Resources Development Act of 1976 authorized the study of the Passaic flooding problem. The Water Resources Development Act of 1990 authorized the recurring operational and maintenance costs for the computerized flood warning system.

LOCATION AND DESCRIPTION: Passaic Basin, Northern New Jersey. The Basin has a history of significant chronic flooding. The system provides critical rain and stream gage information for weather forecasts and warnings; immediate information access by first responders for mitigation action; a network to receive instantaneous watches/warnings; and a forum of quarterly meetings for multi-agency coordination. The system integrates information flow and flood mitigation activities for multi-level response from federal, state, and local agencies, including five New Jersey counties and 12 high-risk municipalities.

FISCAL YEAR 2018 ALLOCATION: $599,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to maintain, repair and upgrade existing stream and rain gauges to ensure they were fully functional and reporting accurate data for use by Emergency Management Offices and the public. Funds were also used for interagency coordination.

FISCAL YEAR 2019 ALLOCATION: $661,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operations and maintenance (O&M) work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $668,000 **T:** $668,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $668,000 – Funds will be used for commonly performed O&M work, including maintenance and repair of existing stream and rain gauges to ensure they are fully functional and reporting accurate data for use by Emergency Management Offices and the public. Funds will also be used for interagency coordination.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: This critical Flood Warning System (PFWS) is operated and maintained through an agreement with other federal and state agencies; specifically the U.S. Geological Survey and the New Jersey Department of Environmental Protection (NJDEP). Historical background of the Passaic Flood Warning System: Upon completion of the construction of the PFWS in the late 1980's, the local sponsor (NJDEP) became responsible for the O&M of the system however, several issues led Congress to enact legislation (through WRDA 1992) to return ownership and O&M responsibilities to USACE (with a provision for 100% Federal funding). USACE in partnership with the U.S. Geological Survey are responsible for the operation and maintenance of the system as well as the day-to-day operations.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $76,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Abiquiu Dam, NM

AUTHORIZATION: Flood Control Acts of 1948, 1950, and 1960
Water Resources Development Act of 1986 and
Energy and Water Development Appropriations Act of 1997 (emergency gates)
P.L. 87-483, 1962 - (authorized the San Juan-Chama Project to transfer interbasin water)
P.L. 97-140, 1981 - (authorized the storage of that water in Abiquiu Reservoir)

LOCATION AND DESCRIPTION: Abiquiu Dam is located in the County of Rio Arriba, six miles west of the town of Abiquiu, NM and 120 miles north of the city of Albuquerque. The dam is 32 miles upstream from the confluence of the Rio Chama and the Rio Grande. The project consists of an earthen-fill dam, reservoir, outlet works, spillway, recreation facilities, and a non-Federal hydroelectric facility.

FISCAL YEAR 2018 ALLOCATION: $3,403,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,678,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including design of infrastructure repairs, evaluating need for grout curtain repairs, stilling basin grouting, new riprap, and to install new roof shelters.

BUDGETED AMOUNT FOR FY 2020: M: $960,000 **O:** $2,370,000 **T:** $3,330,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,342,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including design work to address float well and vent pipe repairs ($125,000), concrete line the outlet channels for the toe drain and south adit flumes ($120,000), repair damaged/crumbling shotcrete above the north adit entrance ($165,000), and replace and re-survey six flumes and install additional concrete lining of approach and exit channels ($65,000).

RC: $630,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $288,000 – Funds will be used for commonly performed O&M work.

WS: $70,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY 2018: flood control damages prevented $562,100,000, sediment control benefits $6,500,000, and irrigation benefits $0.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $852,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cochiti Lake, NM

AUTHORIZATION: River and Harbor Act of 1960, Title II; Supplemental Authorization P.L. 88-293 (1964); and Water Resources Development Act of 1976

LOCATION AND DESCRIPTION: Cochiti Lake is located in the County of Sandoval, on land owned by the Cochiti Nation. It is 50-river-miles north of the city of Albuquerque, New Mexico, at river-mile 340 on the Rio Grande. The project consists of an earthen-fill dam, spillway, outlet works, and recreation facilities. Cochiti Lake is authorized to maintain a 1,200-surface-acre, permanent recreation pool using water from the San Juan-Chama project of the US Bureau of Reclamation, and sufficient water annually to offset evaporation from the area.

FISCAL YEAR 2018 ALLOCATION: $3,146,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,549,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a wireless ethernet purchase, radio remote controller purchase, man basket purchase, plans and specifications for sandblasting and painting service and emergency gates, replace stem packing glands, and plans and specifications for replacing a vehicle bay.

BUDGETED AMOUNT FOR FY 2020: M: $1,299,000 **O:** $2,889,000 **T:** $4,188,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,716,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including wiring and phones upgrades ($200,000) and service and emergency gate repairs ($590,000).

RC: $950,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $522,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY2018: flood control damages prevented $651,722,100 sediment control benefits $4,976,500, and irrigation benefits $0.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $792,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Conchas Lake, NM

AUTHORIZATION: Emergency Relief Act of 1935, Flood Control Acts of 1936 and 1938.

LOCATION AND DESCRIPTION: Conchas Dam and Reservoir is 34 miles northwest of the town of Tucumcari in the County of San Miguel, New Mexico. It is located on the Canadian River 743 miles upstream from the mouth of the Canadian and Arkansas Rivers. Conchas Dam and Reservoir drainage area is 7,409 square-miles. The project consists of a concrete dam structure, earthen-fill embankments, a reservoir, outlet works, and recreation facilities. A State Park is also located at the project.

FISCAL YEAR 2018 ALLOCATION: $5,711,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used to upgrade the electrical system for the administrative complex.

FISCAL YEAR 2019 ALLOCATION: $2,699,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including installing fire suppression system.

BUDGETED AMOUNT FOR FY 2020: M: $1,830,000 **O:** $2,616,000 **T:** $4,446,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,275,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including completing design and award of Irrigation Headworks erosion control-North side ($90,000), Irrigation Headworks South Side erosion control design ($750,000), repair expansion seals on bridge ($120,000), re-seal main dam bridge deck ($160,000), and verify the model and update as needed ($110,000).

RC: $508,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including installation of a radio repeater/antenna ($120,000).

H: N/A

EN: $663,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary line surveys, maintenance, and monitoring of boundary lines ($260,000), and to update the comprehensive Master Plan ($259,000).

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY2018: flood control damages prevented $81,000, sediment control benefits $6,158,200, and irrigation benefits $13,169,500.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $873,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Galisteo Dam, NM

AUTHORIZATION: Rivers and Harbors Act of 1960, Title II (PL 86-845)

LOCATION AND DESCRIPTION: Galisteo Dam is 45 miles north of the city of Albuquerque and 20 miles southwest of the city Santa Fe in the County of Santa Fe. It is located on Galisteo Creek twelve miles upstream from its confluence with the Rio Grande. The project consists of an earthen-fill dam, spillway, and outlet works. Dam safety modifications were completed in 1998 to raise the dam and widen the spillway to the present configuration.

FISCAL YEAR 2018 ALLOCATION: $891,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $931,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M.

BUDGETED AMOUNT FOR FY 2020: M: $441,000 **O:** $634,000 **T:** $1,075,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $714,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a perimeter fence replacement ($220,000).

RC: $66,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $295,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a perimeter fence replacement ($180,000).

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY2018: flood control damages prevented $46,026,100, sediment control benefits $224,100, and irrigation benefits $0. Efforts will be made to continue the control of invasive species, primarily salt cedar, within the upstream basin and on the upstream face of the dam. This ongoing eradication effort will be followed by area restoration with native vegetation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $454,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Jemez Canyon Dam, NM

AUTHORIZATION: Flood Control Acts of 1948 and 1950

LOCATION AND DESCRIPTION: Jemez Canyon Dam is located in the County of Sandoval five miles northwest of the city of Bernalillo and 25 miles northwest of the city of Albuquerque. It is located on the Rio Jemez 2.8 miles upstream from its confluence of the Rio Grande. The project consists of an earthen-fill dam, a spillway, outlet works, and recreation facilities.

FISCAL YEAR 2018 ALLOCATION: $745,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $864,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $61,000 **O:** $917,000 **T:** $978,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $944,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $34,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY2018: flood control damages prevented $60,923,200, sediment control benefits $2,115,400, and irrigation benefits $0. Work continues on addressing impacts to the Santa Ana Pueblo's ancestral Tamaya village, that has drainage problems attributable to USACE construction of a "ring levee" for high flood storage protection.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $143,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Middle Rio Grande Endangered Species Collaborative Program, NM

AUTHORIZATION: Energy and Water Development Appropriations Act, 2006, Consolidated Appropriations Act, 2008, and Omnibus Appropriations Act, 2009.

LOCATION AND DESCRIPTION: The program is located in the Middle Rio Grande from the Colorado border to the headwaters of Elephant Butte in New Mexico. It supports the 2003 Biological Opinion and all subsequent revisions. The Middle Rio Grande Endangered Species Collaborative Program is a multi-stakeholder partnership to protect and improve the status of endangered species along the Middle Rio Grande of New Mexico while simultaneously protecting existing and future regional water uses.

FISCAL YEAR 2018 ALLOCATION: $2,475,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine continued participation in the multi-stakeholder partnership program.

FISCAL YEAR 2019 ALLOCATION: $2,096,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for continued participation in the multi-stakeholder partnership program.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $1,190,000 **T:** $1,190,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,190,000 – Funds will be used for commonly performed operation and maintenance and specific work activities in order to continue collaborative efforts in conjunction with fifteen other agencies and stakeholders to accomplish activities described in the Congressional authority and the Program's Long Term Plan. These efforts include program support and project management; monitoring of completed habitat restoration projects; studying hydrologic effects of flood control structures through data analysis and sediment modeling studies; analysis of life history of the Rio Grande silvery minnow and Southwest Willow Flycatcher through field studies and monitoring; and execution of the adaptive management plan.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $50,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Santa Rosa Dam and Lake, NM

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: Santa Rosa Dam and Lake is in the County of Guadalupe seven miles north of the city of Santa Rosa and 120 miles from the city of Albuquerque. It is located on the Pecos River at river mile 766.4. The project consists of an earthen-fill dam, a spillway, a reservoir, outlet works and recreation facilities. A New Mexico State Park is also located at the project.

FISCAL YEAR 2018 ALLOCATION: $1,567,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine activities included sandblasting and painting service and emergency gates.

FISCAL YEAR 2019 ALLOCATION: $1,371,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M.

BUDGETED AMOUNT FOR FY 2020: M: $534,000 **O:** $1,296,000 **T:** $1,830,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,672,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the repair of gate seals ($375,000).

RC: $126,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $32,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY2018: flood control damages prevented $9.2 million, sediment control benefits $2.4 million, and irrigation benefits $6.3 million. The project has an identified environmental liability caused by mercury in the reservoir sediments.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $305,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Two Rivers Dam, NM

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: The project is located in the County of Chaves County, 14 miles southwest of the city of Roswell. Operation and Maintenance (O&M) of the project is accomplished by contracting with the Chaves County Flood Control Commission. The project consists of two earthen-fill dams (one on the Rio Hondo and the other on Rocky Arroyo, tributaries of the Pecos River), a reservoir, and a spillway.

FISCAL YEAR 2018 ALLOCATION: $586,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,056,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including electrical upgrades, repair gullies on Rocky Dam outlet channel, and designing piezometer monitoring plans for both dams.

BUDGETED AMOUNT FOR FY 2020: M: $164,000 **O:** $544,000 **T:** $708,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $646,000 – Funds will be used for commonly performed O&M work.

RC: $25,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $37,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Accumulated damages prevented by the project since completion through FY2018: flood control damages prevented $463.3 million, sediment control benefits $1.2 million, and irrigation benefits $0.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $272,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Upper Rio Grande Water Operations Model, NM

AUTHORIZATION: Flood Control Act of 1944, Section 7

LOCATION AND DESCRIPTION: The project is focused on the Rio Grande System Hydrologic Unit Code Region 13, Sub regions 1301 to 1309. URGWOM is a computational model developed through an interagency effort and is used to simulate processes and operations of facilities. It also facilitates flood risk management operations, forecasting, accounting, and management of water in the Rio Grande Basin. The project is a critical component used by the U.S. Army Corps of Engineers and other Federal agencies to develop operational scenarios for Endangered Species Act Compliance. URGWOM is also a key tool used to provide water managers with a transparent, consistent, and common set of data to support water management decisions.

FISCAL YEAR 2018 ALLOCATION: $1,287,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $739,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $110,000 **O:** $1,205,000 **T:** $1,315,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,315,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to develop and enhance model rule set and database ($364,000), and to facilitate model development and planning studies for water management in the Upper Rio Grande Basin ($67,000).

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: URGWOM is an important tool for completing long-term planning studies to evaluate impacts of changes to the system or proposed actions analyzed as potential solutions for addressing the water needs in the basin. It is a critical tool for accounting and managing water in the Rio Grande watershed.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $439,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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NEW YORK

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Almond Lake, NY

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738) amended by Flood Control Act 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Almond Lake is near Hornell, New York on Canacadea Creek, a tributary of the Canisteo River, which flows into the Chemung River. Chemung River flows into the Susquehanna River. The dam is an earthen-fill structure, 1,260-feet long rising 90-feet above the streambed, with a gated-outlet conduit in the left abutment, and a concrete spillway in a natural saddle beyond the left abutment. The reservoir has a storage capacity of 14,800 acre-feet at the spillway crest and has an area of 490 acres when filled to that level. The project controls a drainage area of 56 square miles or 36-percent of the watershed of the Canisteo River upstream from Hornell. An additional portion of the watershed is controlled by Arkport Dam. The project forms part of the protection for Hornell, Canisteo, and Addison and reduces flood heights at other localities on the Canisteo and Chemung rivers.

FISCAL YEAR 2018 ALLOCATION: $483,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $734,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including an HSS assessment, a National Register nomination evalution, and removal of submerged woody debris from intake tower trash racks.

BUDGETED AMOUNT FOR FY 2020: M: $111,000 **O:** $715,000 **T:** $826,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: NA

FRM: $788,000 – Funds will be used for commonly performed O&M work and a periodic assessment and underwater inspection.

RC: $18,000 – Funds will be used for commonly performed O&M work.

H: NA

EN: $20,000 – Funds will be used for commonly performed O&M work.

WS: NA

OTHER INFORMATION: Steuben County operates and maintains the Kanakadea Recreation Area under a real estate agreement. Operation of the project provides benefit to a population at risk of 300,000. Flood damages prevented through FY 2018 are $148 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $94,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Arkport Dam, NY

AUTHORIZATION: Flood Control Act of 1936, amended by Flood Control Act of 1938 and described in House Document 702, 77th Congress, 2nd Session.

LOCATION AND DESCRIPTION: Arkport Dam is located near Hornell, New York, on the Canisteo River, a tributary of the Chemung River, which flows into the Susquehanna River. The dam is an earthen-fill structure, 1,200-feet long and rising 113 feet above the streambed, with a concrete spillway and an un-gated outlet in the right abutment.

FISCAL YEAR 2018 ALLOCATION: $342,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $327,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $77,000 **O:** $414,000 **T:** $491,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $483,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection, an underwater inspection and an emergency exercise.

RC: N/A

H: N/A

EN: $8,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Operation of the project provides benefit to a population at risk of 300,000. Flood damages prevented are estimated through FY2014 at $49 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $83,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Black Rock Channel and Tonawanda Harbor, NY 2/

AUTHORIZATION: River and Harbor Acts of 1888, 1916 (P.L. 63-291), 1919 (P.L. 65-200), 1922 (P.L. 67-362), 1925 (P.L. 68-585), 1935 (P.L. 74-409), 1945 (P.L. 79-14) and the Flood Control Act of 1954 (P.L. 83-780)

LOCATION AND DESCRIPTION: Black Rock Channel and Tonawanda Harbor is a low-use, deep draft harbor located on Niagara River in the City of Buffalo, Erie County, NY. It provides vessels of all types a protected waterway around the reefs and swift currents that exist in the upstream portions of the Niagara River. The lock and channel permit commercial vessels and pleasure crafts to travel between Buffalo Harbor and Tonawanda Harbor, and enables further transit to the Hudson River and Atlantic Ocean through the New York State Canal.

FISCAL YEAR 2018 ALLOCATION: $5,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $5,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $5,000 **T:** $5,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: N/A

H: N/A

EN: $5,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: East Sidney Lake, NY

AUTHORIZATION: Flood Control Act of 1936, as amended by Flood Control Act of 1938

LOCATION AND DESCRIPTION: East Sidney Lake is located on Ouleout Creek, five miles above the confluence of Ouleout Creek with the Susquehanna River and six miles upstream from Unadilla, New York. The dam is a combined earthen-fill and concrete gravity-type structure with a spillway and gate-controlled outlets in the concrete section.

FISCAL YEAR 2018 ALLOCATION: $789,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) of dam. Funds were also used for specific work activities including a master plan.

FISCAL YEAR 2019 ALLOCATION: $758,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including energy efficient windows for sustainability.

BUDGETED AMOUNT FOR FY 2020: M: $160,000 **O:** $525,000 **T:** $685,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $644,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including four design documentation reports.

RC: $21,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $20,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project forms part of the flood protection for Binghamton, New York. The project receives runoff from a drainage area of 102 square miles, exclusive of the separately-controlled Chenango River. Operation of the project provides benefit to a population at risk of 305,000. Flood damages prevented are estimated through FY 2018 at $298 million. The Town of Sidney, New York, operates and maintains the East Sidney recreation area under a real estate agreement.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $199,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mount Morris Dam, NY

AUTHORIZATION: The Flood Control Act of 1944 (P.L. 78-534) and Section 5110 of the Water Resources Development Act of 2007 (P.L. 110-114), as amended

LOCATION AND DESCRIPTION: Mount Morris Dam is a dry-bed dam that provides flood damage reduction, recreation, and environmental stewardship for the metropolitan area of Rochester, NY. It also provides flood control for other residential areas, farmlands, and industrial developments in the lower Genesee River Valley. This project includes a visitor center and natural resource management facilities.

FISCAL YEAR 2018 ALLOCATION: $3,853,000

DESCRIPTIONS OF WORK FOR FY 2018: Funding provided for routine operation and maintenance (O&M) activities including dam safety, water control management, debris removal, environmental stewardship activities, and to repair the emergency access stairwells.

FISCAL YEAR 2019 ALLOCATION: $3,758,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funding is also being used for specific work activities including engineering and design activities for the dam access elevator repair, the north side adit tunnel, cleaning the interior drains, and evaluating alternatives for two unused penstocks to prevent further settlement and movement problems.

BUDGETED AMOUNT FOR FY 2020: M: $1,413,000 **O:** $2,191,000 **T:** $3,604,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,376,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Dam Safety Periodic Inspection ($65,000), and investigation, engineering and design into settlement and movement observed within penstock monoliths ($85,000).

RC: $168,000 – Funds will be used for commonly performed O&M work.

EN: $60,000 – Funds will be used for commonly performed O&M work.

H: N/A

WS: N/A

OTHER INFORMATION: The Dam serves 161,000 people who reside and work within the Genesee River 100-year flood plain. Since its completion in 1952, the dam has prevented an estimated $5.5 billion in flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $197,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Southern New York Flood Control Projects, NY

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738), as amended by the Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Project consists of ten local flood protection projects located in New York on tributaries of the North Branch of the Susquehanna River in the cities of Oxford, Avoca, Binghamton, Canisteo, Corning, Elmira, Hornell, Lisle, Whitney Point Village, and Addison.

FISCAL YEAR 2018 ALLOCATION: $719,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $845,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $293,000 **O:** $591,000 **T:** $884,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: NA

FRM: $884,000 – Funds will be used for commonly performed O&M work.

RC: NA

H: NA

EN: NA

WS: NA

OTHER INFORMATION: The Southern New York Local Flood Protection Projects provide for a variety of Federally-constructed channels, levees, floodwalls, check dams and other drainage structures and flood protection treatments. The Federal Government retains responsibility for maintenance of at least some portions of these projects based on the authorizing language. Local interests are responsible for the remaining maintenance. Operation of the project provides benefit to a population at risk of 100,000. Flood damages prevented are estimated through FY 2018 at $2.6 billion.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $273,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Whitney Point Lake, NY

AUTHORIZATION: Flood Control Act of 1936, amended by Flood Control Act of 1938

LOCATION AND DESCRIPTION: Whitney Point Lake is near Whitney Point, New York, on the Otselic River, a tributary of the Tioughnioga River that discharges into the Chenango River which in turn discharges into the Susquehanna River at Binghamton, New York. The dam is an earthen-fill structure, with a concrete spillway and a gated outlet. The project forms part of the protection for Binghamton, New York, and reduces flood heights on the lower Chenango River and throughout the Susquehanna River Valley downstream from Binghamton.

FISCAL YEAR 2018 ALLOCATION: $950,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for the operation and maintenance (O&M) and for a master plan update.

FISCAL YEAR 2019 ALLOCATION: $1,372,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a piezometer replacement, monumentation replacement, design/plans/specs to stabilize crib wall and design documentation report for outlet works gate and hoist systems.

BUDGETED AMOUNT FOR FY 2020: M: $220,000 **O:** $723,000 **T:** $943,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: NA

FRM: $883,000 – Funds will be used for commonly performed O&M work.

RC: $29,000 – Funds will be used for commonly performed O&M work.

H: NA

EN: $31,000 – Funds will be used for commonly performed O&M work.

WS: NA

OTHER INFORMATION: The reservoir has a storage capacity of 86.4 thousand acre-feet and controls a drainage area of 255 square miles, the entire watershed of the Otselic River, and 16-percent of the Chenango River watershed upstream from Binghamton, New York. The project forms part of the protection for Binghamton and reduces flood heights on the lower Chenango River and throughout the Susquehanna River Valley downstream from Binghamton. Operation of the project protects a population at risk of 300 thousand. Flood damages prevented through FY 2018 are an estimated $739 million. The Broome County Department of Parks and Recreation operates and maintains Dorchester Park under a real estate agreement.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $230,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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NORTH CAROLINA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Atlantic Intracoastal Waterway (AIWW), NC

AUTHORIZATION: River and Harbor Acts of 1912, 1927, 1930, 1935, 1937, 1938, 1948, 1950, 1954, 1960 (Section 107), 1966 and 1970 and the Water Resources Development Act of 1976.

LOCATION AND DESCRIPTION: This project is located on the east coast of North Carolina and consists of both high and low use inland navigation channels which run from the Commonwealth of Virginia to Little River, South Carolina, a distance of 308 miles. The authorized project provides for a waterway 12-feet deep, with widths varying from 90 feet in land cuts to 300 feet in open waters. The project also includes numerous side channels with varying project dimensions.

FISCAL YEAR 2018 ALLOCATION: $2,784,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $5,534,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including maintenance dredging and clearing and snagging.

BUDGETED AMOUNT FOR FY 2020: M: $1,575,000 **O:** $580,000 **T:** $2,155,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $2,155,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance dredging ($1,575,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project also supports the following users: U.S. Coast Guard search and rescue operations, U.S. Marine Corps and U.S. Naval riverine training operations, barge traffic supporting intermodal transportation to deep draft ports, military equipment and supply transportation barges and vessels, commercial and recreational vessels, National Oceanic and Atmospheric Administration vessels, and U.S. Army Corps of Engineers vessels. This waterway supports the North Carolina State Ports Authority (bulk-cargo ships) and NUCOR Steel and PCS Phosphate shipments through Morehead City Harbor, North Carolina. This portion of the channel is classified as high use and represents 50 percent of the length of the AIWW within the state of North Carolina.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,786,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: B. Everett Jordan Dam and Lake, NC

AUTHORIZATION: Flood Control Act of 1965

LOCATION AND DESCRIPTION: The project is located on the Haw River in central North Carolina, 4.3 miles above its mouth and 2.5 miles north of Moncure, North Carolina. It provides flood risk management, recreation and other purposes to the public. The project includes an earthen dam 1,330-feet long with a maximum height of 112 feet above the streambed; an uncontrolled, unpaved chute spillway; a controlled 19-foot diameter outlet structure; and saddle dikes just beyond the spillway. The reservoir is operated as part of a coordinated system for flood risk management in the Cape Fear River basin.

FISCAL YEAR 2018 ALLOCATION: $2,492,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included refurbish/replace two of four main water control gates, fund Public Safety Student Conservation Association Intern to promote water safety at project, and a total sustainability work to upgrade water line efficiencies.

FISCAL YEAR 2019 ALLOCATION: $4,733,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including plans and specifications to replace rip rap, inspection of vehicle access bridge, replace/refurbish two water control gates and Dam Safety Inspections of conduit, Tower interior and gates, toe drain system, and Operation Condition Assessment.

BUDGETED AMOUNT FOR FY 2020: M: $241,000 **O:** $1,671,000 **T:** $1,912,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,181,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the survey and repairs to Jordan Dam Saddle Dike ($90,000).

RC: $393,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $325,000 – Funds will be used for commonly performed O&M work.

WS: $13,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: A non-Federal hydropower generating facility is currently operating at this project.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $559,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cape Fear River above Wilmington, NC 2/

AUTHORIZATION: River and Harbor Acts of 1910, 1934, 1935, 1937 and 1965; and Flood Control Act of 1944, Section 4

LOCATION AND DESCRIPTION: The shallow draft navigation project is located in Bladen County in southeastern North Carolina and consists of three Federally-built and maintained locks and dams. The locks and dams were constructed to provide a navigable channel for commercial barges from Wilmington to Fayetteville, NC, a distance of about 111 river miles. This project currently has only minor commercial navigation traffic. The dams also provide "impoundments of convenience" for water intakes for upstream communities and businesses. The grounds at Lock & Dam #2 are being utilized on a quarterly basis by the U.S. Military. The U.S. Navy and the special forces of the U.S. Army utilize the locks and surrounding infrastructure as unique training opportunities.

FISCAL YEAR 2018 ALLOCATION: $210,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $147,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $6,000 **O:** $134,000 **T:** $140,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $140,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Locks No. 1 and 2 are currently rated as Dam Safety Action Classification II structures. A fish passage structure was completed in November 2012 at Lock No.1 as an approved mitigation measure for deepening the Wilmington Harbor 96 Act Navigation channel project.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $293,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Falls Lake, NC

AUTHORIZATION: Flood Control Act of 1965

LOCATION AND DESCRIPTION: The project is located on the Neuse River about 10 miles north of Raleigh, North Carolina and provides flood risk management, water supply, recreation and other purposes to the public. The project includes an earthen dam which is 1,915 feet long with a maximum height of 95 feet above the streambed; an uncontrolled chute spillway 100 feet wide located in the east abutment, and a controlled 17.4-foot diameter outlet structure. This project is operated as part of a coordinated system for flood risk management in the Neuse River basin.

FISCAL YEAR 2018 ALLOCATION: $2,629,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine flood risk management activities include repair and replacement of piezometers, addition of downstream piezometers in the embankment, and refurbish/replace one water control gate.

FISCAL YEAR 2019 ALLOCATION: $3,264,000 2/

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection of vehicle access bridge and surface on Falls control tower, installation of Weir and monitor discharge, restoration of stem guide for service gate 5, refurbishment/replacement of the first of four main water control gates, replace and repair piezometer, addition of downstream piezometers, revise Dam Safety communication plan, toe drain inspection and repair, repair undermined riprap and integrated cultural resource management plan surveys.

BUDGETED AMOUNT FOR FY 2020: M: $198,000 **O:** $1,579,000 **T:** $1,777,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,044,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspect and repair of Emergency Gate Lifting System ($95,000).

RC: $358,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $365,000 - Funds will be used for commonly performed O&M work.

WS: $10,000 - Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Dam is currently rated as a Dam Safety Action Classification III structure.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $352,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: W. Kerr Scott Dam and Reservoir, NC

AUTHORIZATION: Flood Control Act of 1946

LOCATION AND DESCRIPTION: The project is located on the Yadkin River about 6 miles upstream from Wilkesboro, North Carolina and provides flood risk management, recreation, fish and wildlife conservation, water supply and other benefits to the public. The project includes a rolled earth-fill dam over 1,700 feet long with a maximum height of 148 feet above the streambed and a controlled 12.3-foot diameter outlet structure. An emergency spillway is located near the north abutment of the dam in a rock cut.

FISCAL YEAR 2018 ALLOCATION: $3,329,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included fabricating emergency gate hoist, providing for Water Safety Intern, and sustainability work to upgrade the HVAC system and windows to be Energy-Star certified.

FISCAL YEAR 2019 ALLOCATION: $3,393,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including renegotiation of water supply agreements, dam safety periodic inspection, and cost savings measures to upgrade the HVAC system and windows to be Energy-Star certified.

BUDGETED AMOUNT FOR FY 2020: M: $775,000 **O:** $2,576,000 **T:** $3,351,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,406,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Dam safety periodic inspection ($60,000) and perform non-destructive testing on 8 Fracture critical weld sites. ($180,000).

RC: $1,625,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $300,000 – Funds will be used for commonly performed O&M work.

WS: $20,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including renegotiation of water supply agreements ($10,000).

OTHER INFORMATION: A non-Federal hydropower structure add-on license has been issued and the Corps is working with the licensee on reviewing a revised preliminary plan. Wilkes County, one of the primary water supply customers, is continuing to pursue construction of a reservoir intake structure. An environmental assessment was completed with a finding of no significant impact. A real estate easement has been issued and Wilkes County continues to move forward to construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $228,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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NORTH DAKOTA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bowman Haley Lake, ND

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: Located twelve miles southeast of Bowman, North Dakota. Bowman-Haley Dam was constructed for flood damage reduction, fish and wildlife enhancement, and recreation, as well as municipal and industrial water supply. Construction of the dam began in June 1964 and was completed in 1966. The dam measures approximately 5,730 feet in length, with a maximum height of 79 feet from the stream bed to the top of the dam. Bowman-Haley Lake formed at the confluence of Spring Creek, Alkali Creek, and North Fork Grand River; has 17 miles of shoreline and an average depth of 39 feet.

FISCAL YEAR 2018 ALLOCATION: $222,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for non-routine items for automation of the new instrumentation.

FISCAL YEAR 2019 ALLOCATION: $325,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including: updating hydrology and routing the inflow design flood and dam safety surveys.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $317,000 **T:** $317,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $264,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including: periodic assessment of Bowman-Haley Dam ($80,000).

RC: $5,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $48,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 totals $27.2 million. The project encompasses 6,720 land acres, 1,764 water acres with 17 miles of shoreline, and has a total reservoir storage capacity of 91 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $27,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Garrison Dam, Lake Sakakawea, ND

AUTHORIZATION: The Flood Control Act of 1944 (PL 78-534) and the Endangered Species Act of 1973 (PL 93-205)

LOCATION AND DESCRIPTION: The Garrison Project is located 75 miles upstream from Bismarck, North Dakota. Garrison Dam construction began in 1947 and was completed in 1953. The dam measure 13,200 feet long and has a maximum height of 210 feet. Lake Sakakawea is 178 miles long with approximately 1,300 miles of shoreline and a maximum depth of 180 feet. The water at Garrison Dam provides benefits of flood damage reduction, power generation, navigation, fish and wildlife, recreation, irrigation, water supply and water quality.

FISCAL YEAR 2018 ALLOCATION: $20,570,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including replace failed levee monitoring instrumentation, rehabilitate instrumentation, and place additional instrumentation in key areas on the Williston Levee, rehabilitate an intake structure bridge crane, rehabilitate pumps at the Williston Levee pump plant, rehabilitate the Williston Levee crest and toe roads, boundary inspection and marking, and repair power plant generator bay roof panels.

FISCAL YEAR 2019 ALLOCATION: $15,611,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including Williston Levee inundation mapping, dam safety surveys for periodic inspection, Williston pumping plant stilling basin remote operated vehicle inspection, create an Interim Risk Reduction Management Plan for the Snake Creek Embankment, an underwater bridge inspection at Garrison intake structure bridge, cultural site surveys, boundary locating and monitoring and fencing, testing and analysis to determine spillway gate fitness for service, assessment and rehabilitation of Snake Creek relief wells, perform a periodic artifacts inventory, collection review and site inspection, and installation of a water line to connect the downstream cap loops to a local water supply.

BUDGETED AMOUNT FOR FY 2020: M: $1,941,000 **O:** $14,060,000 **T:** $16,001,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $660,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic assessment for Williston Levees ($80,000).

RC: $733,000 – Funds will be used for commonly performed O&M work.

H: $6,541,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including analysis for hydropower operational data ($25,000).

EN: $2,615,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $5,437,000 shared between business lines as follows: HYD – 44%, NAV – 24%, and FRM – 32%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a spillway stop log inspection ($17,000) and spillway gate fitness for service analysis and testing ($90,000). Cumulative flood damages prevented at the project through FY 2017 is $19.5 billion. Plant installed generation capacity of 583 megawatts, produced $72.9 million in power production in FY 2017. The project encompasses 462.5 thousand land acres, 376.5 thousand water acres with 1,881 miles of shoreline, and has a total reservoir storage capacity of 23.5 million acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $587,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Homme Lake, ND

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The Homme Lake dam is on the South Branch of Park River about 4 miles upstream from Park River, North Dakota and 62.1 miles above the mouth of Park River. South, Middle, and North Branches are headwater streams of Park River and rise in Cavalier County in northeastern North Dakota and flow easterly to an almost common confluence near Grafton, North Dakota.

FISCAL YEAR 2018 ALLOCATION: $335,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $334,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $352,000 **T:** $352,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $347,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $5,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Homme Lake was authorized and constructed for water supply and flood control. It provides backup water supply for the communities of Park River and Grafton, ND. The project also provides flood risk reduction benefits to downstream areas and has prevented approximately $2.9 million in damages since construction.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 into FY 2019 was $19,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lake Ashtabula and Baldhill Dam, ND

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: Baldhill Dam is on the Sheyenne River, 16 miles upstream from Valley City, ND, and about 271 miles above the mouth. The Sheyenne River begins in central North Dakota and flows 500 miles generally southeast to enter the Red River of the North about 10 miles north of Fargo, North Dakota. Baldhill Dam was constructed to reduce flood damages, primarily at Valley City, and to alleviate water shortages in municipal and rural areas along the Sheyenne River and the Red River of the North. Placed into operation in 1950, the dam is a 1,650 foot long compacted earth structure with concrete gravity control works 140 feet in length. The reservoir, Lake Ashtabula, has a capacity of 68,600 acre feet at normal pool level.

FISCAL YEAR 2018 ALLOCATION: $1,730,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used to perform survey and rectification of the government boundary line.

FISCAL YEAR 2019 ALLOCATION: $1,979,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are being used for specific work activities including update the master plan, and ogee crest concrete repairs. Sustainability funds are being used for lighting upgrades, installing ground source heat pump, and upgrading building insulation.

BUDGETED AMOUNT FOR FY 2020: M: $105,000 **O:** $1,483,000 **T:** $1,588,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $935,000 – Funds will be used for commonly performed O&M work.

RC: $312,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $341,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project provides limited protection from floods downstream from the dam. It also provides sufficient water flow during dry periods to meet water supply needs of municipalities and rural areas along the Sheyenne River and the Red River downstream from the mouth of the Sheyenne River. The project has prevented over $477,000,000 in damages through operations of the dam since construction, and the water supply benefits are critical to the downstream municipalities. Lake Ashtabula is recognized by local, state and Federal partners as a major natural resource asset in the State of North Dakota.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 to FY 2019 was $155,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pipestem Lake, ND

AUTHORIZATION: Rivers and Harbors Act of 1962 (PL 87-874)

LOCATION AND DESCRIPTION: Located four miles north of Jamestown, North Dakota, off highway 52/281. Pipestem Dam was constructed for flood damage reduction, fish and wildlife enhancement, and recreation. Construction of the dam began in June 1971, and was completed in 1973. The dam measures approximately 4,000 feet in length, with a maximum height of 107.5 feet from the stream bed to the top of the dam. Pipestem Lake is 5.5 miles long and has a maximum depth of 30 feet under normal operation. The lake drains an approximate 594 square mile area, and has a multipurpose storage capacity of 8,944 acre-feet.

FISCAL YEAR 2018 ALLOCATION: $741,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M)**.** Funds were also used for specific work activities including to improve accessibility to the right abutment coulee for dam safety monitoring.

FISCAL YEAR 2019 ALLOCATION: $498,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $706,000 **T:** $706,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $560,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection of Pipestem Dam ($50,000), surveys in support of the periodic inspection ($40,000), and a bridge inspection ($38,000).

RC: $28,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $118,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 totals $166.1 million. The project encompasses 4.2 thousand land acres, 840 water acres with 15 miles of shoreline, and has a total reservoir storage capacity of 143 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $32,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Souris River, ND

AUTHORIZATION: Water Resources Development Act of 1986 (P.L. 99-662)

LOCATION AND DESCRIPTION: The project is located in Ward, Renville, McHenry, and Bottineau Counties in northwestern North Dakota. The project consists of eight water control structures and several mitigation features all located within the Upper Souris and J. Clark Salyer National Wildlife Refuges.

FISCAL YEAR 2018 ALLOCATION: $1,568,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were used for specific work activity including replacement of dam bulkheads at Lake Darling dam.

FISCAL YEAR 2019 ALLOCATION: $2,009,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of dam bulkheads and repairs of the tainter gate at Lake Darling dam.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $386,000 **T:** $386,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $386,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: A Memorandum of Understanding (MOU) between the Department of the Interior (Fish and Wildlife Service) and the Department of the Army was executed in 1989 establishing procedures, administration, cooperation and coordination between respective agencies for construction, operation and maintenance, rehabilitation and replacement for project flood control and mitigation features. This MOU in conjunction with International Agreements with Canada commits the Corps to several water management, water quality, cyclical and major maintenance responsibilities. Lake Darling Dam which is part of the Souris River Projects complex, located on the Souris River near Minot, ND, has prevented approximately $185 million in damages since construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $389,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

OHIO

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Alum Creek Lake, OH

AUTHORIZATION: Section 203 of Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: Alum Creek Lake is located in Delaware County, OH on Alum Creek of the Big Walnut Creek, a tributary of the Scioto River. It is 26 miles above the mouth of Alum Creek and 157 miles above the mouth of the Scioto River. The project includes Alum Creek Lake, which is impounded by a rolled earth fill dam with a gated concrete spillway. The crest length of the dam is 10,200 feet. The dam was completed in August of 1974.

FISCAL YEAR 2018 ALLOCATION: $1,562,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities and to purchase an electric mule.

FISCAL YEAR 2019 ALLOCATION: $2,214,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including cleaning relief wells ($262,000).

BUDGETED AMOUNT FOR FY 2020: M: $515,000 **O:** $1,466,000 **T:** $1,981,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,457,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including completing Survey Monument Markers ($43,000).

RC: $227,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $180,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including completing a Historic Properties Management Plan ($75,000).

WS: $117,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented over $178,406,000 in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $138,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Berlin Lake, OH

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Berlin Lake Dam is located on the Mahoning River in Mahoning and Portage Counties, OH, about 10 miles upstream from Milton Dam (Non-Federal Project) and about 35 miles upstream from Warren. The lake is located in Mahoning, Portage, and Stark Counties, OH. Berlin Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $3,287,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $3,518,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including security measures, updating the water control manual and cultural resources site monitoring and protection.

BUDGETED AMOUNT FOR FY 2020: M: $649,000 **O:** $2,113,000 **T:** $2,762,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,012,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($25,000).

RC: $705,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $37,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Berlin Lake has prevented more than $2,000,000,000 in damages since its completion in 1943. Additionally, the lake has historically served as a water supply for the Mahoning Valley Sanitary District. The estimated revenue from the water supply contract is between $25,000 and $50,000.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $408,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Caesar Creek Lake, OH

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Caesar Creek Lake is located in Warren, Clinton and Greene Counties in Ohio. The dam is earthen- and rock-fill with four saddle dams, outlet works, and spillway. The dam is 165 feet high and 2,650 feet long. It is the site of a class "A" visitor center and is world renowned for its 450 million year old Ordovician fossil beds exposed by the project's emergency spillway. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply and water quality.

FISCAL YEAR 2018 ALLOCATION: $2,322,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Additional funds were used for cost savings activities for an energy efficient HVAC system and to replace two bypass gates.

FISCAL YEAR 2019 ALLOCATION: $2,379,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including modeling work to update the inflow design flood and stilling basin repair and slush grouting.

BUDGETED AMOUNT FOR FY 2020: M: $1,065,000 **O:** $1,872,000 **T:** $2,937,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,530,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections and evaluations ($27,000), dewatering stilling basin ($235,000), movement monument surveys ($22,000), periodic inspection ($150,000), solar power installation ($183,000), and bank stabilization ($306,000).

RC: $251,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $148,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including endangered species habitat work ($8,000).

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $332,700,000 in flood damages since 1977.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $270,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Clarence J. Brown Dam & Reservoir, OH

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: Clarence J. Brown Dam & Reservoir is located in the northeastern corner of Clark County near Springfield, OH. The project is on Buck Creek, about 7 miles above the confluence with the Mad River, a tributary of the Great Miami River. The 72-foot high and 6,620-foot long dam is earthen-fill with gated controlled outlet works and uncontrolled open spillway. The site also has a Project visitor's center. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,315,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Additional funds were used for the replacement of a floatwell valve.

FISCAL YEAR 2019 ALLOCATION: $1,505,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a facility security assessment and master plan compliance.

BUDGETED AMOUNT FOR FY 2020: M: $273,000 **O:** $1,208,000 **T:** $1,481,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,240,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections and evaluations ($18,000), movement monument surveys ($22,000), and a periodic inspection ($70,000).

RC: $138,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $103,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $17,400,000 in flood damages since 1973.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $20,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Deer Creek Lake, OH

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Deer Creek Lake is located in Pickaway County, Ohio, on Deer Creek which is a tributary of the Scioto River. The project site is 21 miles above the mouth of Deer Creek and 105.8 miles above the mouth of the Scioto River. The lake is approximately seven miles south-southwest of the town of Mount Sterling. The project includes operation and maintenance (O&M) of Deer Creek Lake, which is impounded by a rolled earth-fill dam. There is also a concrete gravity channel section that has a maximum height of 93 feet and a total crest length of 3,800 feet. The dam was completed in 1968.

FISCAL YEAR 2018 ALLOCATION: $2,209,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities and to repair the tainter gate platforms.

FISCAL YEAR 2019 ALLOCATION: $1,647,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M activities. Funds are also being used for specific work activities including an instrumentation survey ($22,000).

BUDGETED AMOUNT FOR FY 2020: M: $2,063,000 **O:** $1,334,000 **T:** $3,397,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,934,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing inspection activities ($122,000), repairing and painting of tainter Gates ($440,000), and replacing service bridge deck ($1,065,000).

RC: $248,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $215,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: The project has prevented over $107,500,000 in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $138,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Delaware Lake, OH

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Delaware Lake is located in central Ohio, situated along U.S. Route 23 and within Delaware, Marion, and Morrow Counties. Delaware Lake is located on the Olentangy River, a tributary of the Scioto River, 32 miles above the mouth of the Olentangy River, 164.4 miles above the mouth of the Scioto River, and 3 miles above Delaware city limits. The project includes operation and maintenance (O&M) of Delaware Lake. The project was completed in July of 1948 and consists of an 18,600-foot long and 92-foot high embankment dam with a gated control concrete gravity spillway. It includes a 6,500-foot long embankment levee with two pump station works to protect the Village of Waldo and vicinity, located 9 miles upstream from the dam. The outlet works consist of five gated tunnels which discharge into a concrete stilling basin. The spillway consists of six tainter gates and hoist machinery that operates to release excess water to prevent overtopping and dam failure.

FISCAL YEAR 2018 ALLOCATION: $1,520,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $2,369,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M activities. Funds are also being used for specific work activities including updating the Interim risk reduction measures plan, stockpiling emergency materials, installing closed circuit TV, installing uplift cells in the gallery, repairing and painting the dam intake sluice gates and dam intake tainter gate machinery, repairing the Waldo pump stations culverts and replacing or repairing gutters in conjunction with dam access road.

BUDGETED AMOUNT FOR FY 2020: M: $605,000 **O:** $1,141,000 **T:** $1,746,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,515,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including a Periodic Assessment ($78,000).

RC: $171,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $60,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project has prevented over $179,100,000 in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $29,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Dillon Lake, OH

AUTHORIZATION: Section 4 of the Flood Control Act (FCA) of 1938 (P.L. 75-761) as amended by Section 4 of FCA 1939 (P.L. 76-396)

LOCATION AND DESCRIPTION: Dillon Lake is located in Muskingum County, OH on the Licking River, a tributary of the Muskingum River. It is 5.8 miles above the mouth of the Licking River and 83.4 miles above the mouth of the Muskingum River. The project includes operation and maintenance (O&M) of Dillon Lake. The lake is impounded by a rolled earth-fill dam with impervious core and an uncontrolled partially concrete lined spillway. The top length of the dam is 1,400 feet. The dam was completed in July of 1959.

FISCAL YEAR 2018 ALLOCATION: $1,474,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $1,480,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities ($108,000).

BUDGETED AMOUNT FOR FY 2020: M: $988,000 **O:** $1,216,000 **T:** $2,204,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,782,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including machine guarding ($230,000) and installation of gabion mesh on rock wall near outflow ($127,000).

RC: $182,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $240,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: The project has prevented $996,548,000 in flood damages through FY 2018.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $64,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Massillon Local Protection Project, OH

AUTHORIZATION: Section 4 of the Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Massillon Local Protection Project is located in Stark County, OH on the Tuscarawas River. Maintenance of the levee is a joint responsibility of the City of Massillon and the U.S. Army Corps of Engineers. Annual mowing and dam inspections are required.

FISCAL YEAR 2018 ALLOCATION: $101,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $100,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities.

BUDGETED AMOUNT FOR FY 2020: M: $5,000 **O:** $110,000 **T:** $115,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $115,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project has prevented over $5,711,000 in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $13,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Michael J. Kirwan Dam and Reservoir, OH

AUTHORIZATION: Flood Control Act of 1958 (P.L. 85-500), with local cooperation requirements modified by the Flood Control Act of 1960 (P.L. 86-645)

LOCATION AND DESCRIPTION: Michael J. Kirwan Dam is located near Newton Falls, OH on the West Branch of the Mahoning River, about 12.0 miles above the junction of the West Branch and the Mahoning River. The reservoir is located entirely within Portage County. Michael J. Kirwan Dam and Reservoir is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $2,246,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project and repairs to the spillway due to erosion.

FISCAL YEAR 2019 ALLOCATION: $1,752,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing the electric service to the control tower and updating the water control manual.

BUDGETED AMOUNT FOR FY 2020: M: $369,000 **O:** $1,112,000 **T:** $1,481,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,371,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacing the electric service to the control tower ($71,000), resolution of encroachments ($15,000), and inspection activities ($25,000).

RC: $77,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $33,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Michael J. Kirwan Dam is estimated to have prevented more than $897,000,000 in damages since its completion in 1967.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $184,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mosquito Creek Lake, OH

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Mosquito Dam is on Mosquito Creek, 12.6 miles upstream from its junction with the Mahoning River at Niles, OH. The multi-purpose reservoir is located entirely in Trumbull County.

FISCAL YEAR 2018 ALLOCATION: $1,204,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $2,138,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including sealing the stilling basin training wall joints, shoreline management, pest and invasive species management, special status species management and updating the water control manual.

BUDGETED AMOUNT FOR FY 2020: M: $349,000 **O:** $1,103,000 **T:** $1,452,00 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,215,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($25,000).

RC: $158,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $71,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Mosquito Creek Lake is estimated to have prevented more than $497,000,000 in damages since its completion in 1944. The lake serves as a water source for the City of Warren.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $83,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Muskingum River Lakes, OH

AUTHORIZATION: Section 4 of the Flood Control Act (FCA) of 1938 (P.L. 75-761) as amended by Section 4 of the FCA of 1939 (P.L. 76-396)

LOCATION AND DESCRIPTION: The Muskingum River basin is the largest watershed within the state of Ohio. The river and its tributaries drain 8,051 square miles in all or parts of 24 counties in the southeastern portion of the state. The Muskingum River project includes operation and maintenance (O&M) of Atwood Lake, Beach City Lake, Bolivar Dam, Charles Mill Lake, Clendening Lake, Dover Dam, Leesville Lake, Mohawk Dam, Mohicanville Dam, Piedmont Lake, Pleasant Hill Lake, Senecaville Lake, Tappan Lake, and Wills Creek Lake.

FISCAL YEAR 2018 ALLOCATION: $11,718,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities, replacing discharge gate embedded seal at Senacaville, repairs to the sump pump and water pipes at the pump station at Magnolia, and Interim Risk Reduction Measures (IRRM) for toe drain plans and specifications at Magnolia, replacing 2 relief wells at Tappan, repairing the toe drain at Mohawk, and updating the Interim Risk Reduction Measures plan.

FISCAL YEAR 2019 ALLOCATION: $16,956,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities, replacing the Atwood service bridge, repairing the service bridge at Piedmont Lake; augmenting the seepage blanket, and repairing cracks in the concrete wingwalls of the downstream outlet channel at Wills Creek Lake.

BUDGETED AMOUNT FOR FY 2020: M: $5,445,000 **O:** $7,014,000 **T:** $12,459,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $11,834,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing inspection activities ($562,000), replacing 2 of 6 dam sluice gates at Beach City ($1,090,000), and resurfacing, cleaning and painting Wills Creek Intake Service bridge ($255,000).

RC: $348,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $277,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: Collectively, the Muskingum River Lake projects have prevented over $5.0 billion in damages over the course of their operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $905,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: North Branch Kokosing River Lake, OH

AUTHORIZATION: Section 203 of the Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: The North Branch Kokosing River Lake project is located north of Mount Vernon and west of Fredericktown, OH. Kokosing Dam was built by the U.S. Army Corps of Engineers for flood control, recreation, and wildlife management. The dam, completed in 1972, has a crest length of 1,400 feet. The Ohio Division of Natural Resources is responsible for fish and wildlife conservation at the lake. The Kokosing Lake Campground, located on the banks of Kokosing Lake, is leased by Muskingum Watershed Conservancy District.

FISCAL YEAR 2018 ALLOCATION: $698,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $557,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities.

BUDGETED AMOUNT FOR FY 2020: M: $200,000 **O:** $531,000 **T:** $731,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $546,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including completing an Environmental Compliance (ERGO) inspection ($6,000).

RC: $30,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $155,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $22,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ohio-Mississippi Flood Control, OH

AUTHORIZATION: Section 7 of the Flood Control Act of 1944, P.L. 74-58 (58 Stat. 890; 33 U.S.C. 709)

LOCATION AND DESCRIPTION: This project funds activities associated with the direction of releases from the Tennessee and Cumberland Rivers during periods of flooding on the lower Ohio and Mississippi Rivers, for the primary purpose of protecting the Mississippi River and Tributaries system of levees.

FISCAL YEAR 2018 ALLOCATION: $1,200,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,682,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $1,537,000 **T:** $1,537,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,537,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: This project returns an estimated average $18 million of flood damage reduction benefits for every $1 million spent. These capabilities were essential in preventing overtopping of the Mississippi River and Tributaries levee system during the record 2011 Greater Mississippi River Basin flood and more recently the 2016 flood.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $630,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Paint Creek Lake, OH

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Paint Creek Lake is located in Ross and Highland Counties, OH on Paint Creek, a tributary of the Scioto River. It is 36.8 miles above the mouth of Paint Creek and 100 miles above the mouth of the Scioto River. The lake is impounded by an earthen- and rock-fill dam with a central impervious core and a gated spillway. Its maximum height is 118 feet with a top length of 700 feet. The dam was completed in 1974.

FISCAL YEAR 2018 ALLOCATION: $1,444,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed O&M activities.

FISCAL YEAR 2019 ALLOCATION: $1,581,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including instrumentation survey, automation of the piezometers, and inspecting the Greenfield Levee pipes.

BUDGETED AMOUNT FOR FY 2020: M: $1,598,000 **O:** $1,382,000 **T:** $2,980,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,515,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic assessment ($208,000), steel structure inspections ($4,000), repairs to four tainter gate operating machinery piers ($870,000), and installation of moving parts machine guarding ($150,000).

RC: $185,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $260,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including completing a Historic Properties Management Plan ($25,000) and a master plan update ($150,000).

WS: $20,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented over $159 million in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $90,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Roseville Local Protection Project, OH

AUTHORIZATION: Section 4 of the Flood Control Act (FCA) of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Roseville Local Protection Project is located in the village of Roseville, about 9.5 miles southwest of Zanesville and 66 miles east of Columbus. The project is on the Moxahala Creek, a tributary of the Muskingum River. The Protection Project consists of 7,291 feet of channel improvements, 5,500 feet of levees, a pump station, and four gate-wells on outfalls that empty into Moxahala Creek.

FISCAL YEAR 2018 ALLOCATION: $47,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $37,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities.

BUDGETED AMOUNT FOR FY 2020: M: $54,000 **O:** $0 **T:** $54,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $54,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project has prevented over $1.4 million in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $20,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tom Jenkins Dam, OH

AUTHORIZATION: Section 10 of Flood Control Act of 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: The Federal project includes the Tom Jenkins Dam and Burr Oak Reservoir, which is located in Athens County, OH. The dam is 0.3 miles above the mouth of East Branch of Sunday Creek and 57.2 miles above the mouth of the Hocking River. The dam, completed in 1950, is rolled earthen-fill with a maximum height of 84 feet and a top length of 944 feet.

FISCAL YEAR 2018 ALLOCATION: $790,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $866,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities.

BUDGETED AMOUNT FOR FY 2020: M: $462,000 **O:** $993,000 **T:** $1,455,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,136,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing inspection activities ($114,000) and installation of facility physical security surveillance system ($110,000).

RC: $75,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $224,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: $20,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented over $30.8 million in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $8,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: West Fork of Mill Creek Lake, OH

AUTHORIZATION: Flood Control Act of 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: West Fork Lake is 14 miles north of Cincinnati in Hamilton County, Ohio. The dam is an earthen-fill dam, 100-feet high and 1,100-feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, and water quality. In addition, it provides a reduction of pumping requirements at the barrier dam of the local flood protection works at Cincinnati. Recreational development is under lease agreement to the Hamilton County Park District Board.

FISCAL YEAR 2018 ALLOCATION: $763,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,653,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including master plan compliance, a security assessment, repairing or replacing rock slide mesh, and evaluating the reduction in spillway flow capacity.

BUDGETED AMOUNT FOR FY 2020: M: $334,000 **O:** $868,000 **T:** $1,202,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,110,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections and evaluations ($9,000), movement monument surveys ($22,000), periodic inspection and assessment ($150,000), removing rock from spillway bucket ($105,000), and replacement of electronic security system ($25,000).

RC: $36,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $56,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This project is estimated to have prevented a total of $118.2 million in flood damages since 1952.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $37,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: William H. Harsha Lake, OH

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: William H. Harsha Lake is located on the East Fork of the Little Miami River just downstream of Williamsburg in Clermont County, Ohio. The dam is earthen-fill with outlet works, a separate saddle dam, and spillway. The dam is 200-feet high and 1,450-feet long. The Saddle Dam is 100-feet high and 2,600-feet long. The project was authorized as a multi-purpose flood control project with additional authorized responsibilities for recreation management, environmental stewardship, water supply and water quality.

FISCAL YEAR 2018 ALLOCATION: $1,271,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,638,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing the stilling basin, replacing the waste water treatment plant, and additional security measures at the project.

BUDGETED AMOUNT FOR FY 2020: M: $1,176,000 **O:** $1,490,000 **T:** $2,666,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,141,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection and reports ($79,000), installing a sewage line to the municipal sewer to replace failing wastewater treatment plant, and movement monument surveys ($22,000).

RC: $143,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $374,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project is estimated to have prevented a total of $127 million in flood damages since 1977.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $64,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Arcadia Lake, OK

AUTHORIZATION: Flood Control Act of 1970

LOCATION AND DESCRIPTION: Arcadia Lake is located in the metropolitan area of Oklahoma City and Edmond in Oklahoma County on the Deep Fork River at river mile 218.3. This is a multi-purpose project with flood control, water supply, and recreation facilities. The project covers 1,820 acres and has a 5,250 foot long rolled earth filled embankment with an uncontrolled saddle spillway.

FISCAL YEAR 2018 ALLOCATION: $717,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $617,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $82,000 **O:** $425,000 **T:** $507,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $343,000 – Funds will be used for commonly performed O&M work.

RC: $36,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $113,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1986, Arcadia Lake is estimated to have prevented over $44 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $537,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Birch Lake, OK

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Birch Lake is 1.5 miles south of the town of Barnsdall in Osage County, Oklahoma. It is located at river mile 0.8 on Birch Creek, a tributary of Bird Creek. This is a multi-purpose project authorized for flood control, water supply, water quality control, recreation, and fish and wildlife. The project consists of a 3,193 foot long rolled earth fill embankment with an uncontrolled spillway, and a conduit controlled by two slide gates. At conservation pool depth, the lake covers 1,137 acres.

FISCAL YEAR 2018 ALLOCATION: $3,616,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including repair of the service and emergency gates.

FISCAL YEAR 2019 ALLOCATION: $770,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $140,000 **O:** $971,000 **T:** $1,111,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $762,000 – Funds will be used for commonly performed O&M work.

RC: $280,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $69,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Since construction in 1977, Birch Lake is estimated to have prevented over $171 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,354,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Broken Bow Lake, OK

AUTHORIZATION: Flood Control Act of 1958

LOCATION AND DESCRIPTION: Broken Bow Lake is 9 miles northeast of the town of Broken Bow in McCurtain County, Oklahoma. The project is located on the Mountain Fork River, a tributary of the Little River, at river mile 20.3. This is a multi-purpose project authorized for flood control, hydropower, water supply, recreation, and fish and wildlife. The project consists of a 2,750 foot long rolled earth fill embankment with a concrete ogee weir controlled spillway, eight tainter gates, and two 50 megawatt generators. At conservation pool depth the lake covers 14,200 acres.

FISCAL YEAR 2018 ALLOCATION: $7,353,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including construction of a new floating bulkhead and a new sequential events recorder.

FISCAL YEAR 2019 ALLOCATION: $2,053,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $687,000 **O:** $3,210,000 **T:** $3,897,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $62,000 – Funds will be used for commonly performed O&M work.

RC: $74,000 – Funds will be used for commonly performed O&M work.

H: $2,280,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection and certification activities for load handling equipment ($125,000).

EN: $113,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1970, Broken Bow Lake is estimated to have prevented $102 million in cumulative flood damages. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,353,000 shared between business lines as follows: FRM – 69%, REC – 23%, HYD – 7%, and EN – 1%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the preparation of the project portion of the Red River basin water control manual ($100,000). The cold water fishery below Broken Bow Lake is one of the premier brown and rainbow trout streams in the south-central United States.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $3,934,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Canton Lake, OK

AUTHORIZATION: Flood Control Act of 1938, Flood Control Act of 1946, Flood Control Act of 1948, and the Water Resources Development Act of 1990

LOCATION AND DESCRIPTION: Canton Lake is located on the North Canadian River at river mile 394.3, about 2 miles north of the town of Canton in Blaine County, Oklahoma. This is a multi-purpose project with flood control, water supply, and irrigation outputs. The project consists of a 15,140 foot long rolled earth fill embankment with a 640 foot gated concrete spillway that rises to a maximum height of 68 feet. Spillway discharges are controlled by 16 tainter gates. At conservation pool depth the lake covers 7,910 acres.

FISCAL YEAR 2018 ALLOCATION: $2,127,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,098,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $296,000 **O:** $1,464,000 **T:** $1,760,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $664,000 – Funds will be used for commonly performed O&M work.

RC: $959,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $122,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1948, Canton Lake is estimated to have prevented $140 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $330,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operations and Maintenance, Fiscal Year 2020

PROJECT NAME: Copan Lake, OK

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Copan Lake is nine miles north of the City of Bartlesville in Washington County, Oklahoma. It is located at river mile 7.4 on the Little Caney River, a tributary of the Caney River. This is a multi-purpose project authorized for flood control, water supply, water quality control, recreation, and fish and wildlife. The project consists of a 7,730 foot long rolled earth fill embankment with a gate controlled, concrete, gravity ogee weir with four tainter gates. At conservation pool depth the lake covers 4,449 acres.

FISCAL YEAR 2018 ALLOCATION: $2,530,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to complete repairs to the tainter gates and embankment.

FISCAL YEAR 2019 ALLOCATION: $1,159,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including to purchase a new winch truck.

BUDGETED AMOUNT FOR FY 2020: M: $241,000 **O:** $931,000 **T:** $1,172,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $759,000 – Funds will be used for commonly performed O&M work.

RC: $255,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $143,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1983, Copan Lake is estimated to have prevented $1.2 billion in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $145,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Eufaula Lake, OK

AUTHORIZATION: River and Harbor Act of 1946

LOCATION AND DESCRIPTION: Eufaula Lake is 12 miles east of the town of Eufaula in McIntosh County, Oklahoma and located on the Canadian River at river mile 27. This is a multi-purpose project authorized for flood control, hydropower, navigation and water supply. The project consists of a 3,300 foot long rolled earth fill embankment with a concrete gravity ogee weir controlled spillway with 11 tainter gates. The project contains three 30-megawatt hydropower generator units. At conservation pool depth the lake covers 105,500 acres.

FISCAL YEAR 2018 ALLOCATION: $18,435,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for the operation and maintenance (O&M). Funds were also used for specific work activities including replacement of the spillway bridge, installation of a new sequential event recorder in the powerhouse, and replacement of a leaking potable water line.

FISCAL YEAR 2019 ALLOCATION: $6,760,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $2,158,000 **O:** $5,065,000 **T:** $7,223,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,024,000 – Funds will be used for commonly performed O&M work.

RC: $1,990,000 – Funds will be used for commonly performed O&M work.

H: $2,141,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection and certification activities for load handling equipment ($125,000).

EN: $1,315,000 – Funds will be used for commonly performed O&M work.

WS: $50,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1964, Eufaula Lake is estimated to have prevented $740 million in cumulative flood damages. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $703,000 shared between business lines as follows: FRM – 67%, NAV – 18%, HYD – 14%, and EN – 1%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $11,980,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fort Gibson Lake, OK

AUTHORIZATION: Flood Control Act of 1941, River and Harbor Act of 1946, and the Water Resources Development Act of 1986

LOCATION AND DESCRIPTION: Fort Gibson Lake is 12 miles northeast of the town of Muskogee in Mayes, Wagoner, and Cherokee Counties of Oklahoma. It is located on the Grand (Neosho) River at river mile 7.7. This is a multi-purpose project authorized for flood control and hydropower. The project consists of a 2,990 foot long rolled earth fill embankment with a concrete, gravity ogee weir controlled spillway and the powerhouse intake structure. The spillway is equipped with thirty tainter gates, and the powerhouse has four 11.25 megawatt generator units. At conservation pool depth the lake covers 19,900 acres.

FISCAL YEAR 2018 ALLOCATION: $5,914,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including procurement of a new sequential event recorder for the powerhouse.

FISCAL YEAR 2019 ALLOCATION: $4,948,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $773,000 **O:** $4,715,000 **T:** $5,488,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $421,000 – Funds will be used for commonly performed O&M work.

RC: $1,538,000 – Funds will be used for commonly performed O&M work.

H: $1,842,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection and certification activities for load handling equipment ($125,000).

EN: $970,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including updating the project Shoreline Management Plan ($500,000).

WS: N/A

OTHER INFORMATION: Since construction in 1949, Fort Gibson Lake is estimated to have prevented $582 million in cumulative flood damages. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $717,000 shared between business lines as follows: FRM – 52% and HYD – 48%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $515,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fort Supply Lake, OK

AUTHORIZATION: Flood Control Act of 1936

LOCATION AND DESCRIPTION: Fort Supply Lake is 12 miles northwest of the town of Woodward in Woodward County, Oklahoma. It is located at river mile 5.5 on Wolf Creek, a tributary of the North Canadian River. This is a multi-purpose project authorized for flood control and water supply. The project consists of an 11,865 foot long rolled earth fill embankment with an uncontrolled, concrete, chute-type spillway. Spillway discharges are controlled by three vertical lift gates. At conservation pool depth the lake covers 1,820 acres.

FISCAL YEAR 2018 ALLOCATION: $1,293,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to purchase a new winch truck.

FISCAL YEAR 2019 ALLOCATION: $908,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $456,000 **O:** $804,000 **T:** $1,260,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $720,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including preparing plans and specifications to repair the spillway bridge ($240,000).

RC: $454,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $86,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Since construction in 1942, Fort Supply Lake is estimated to have prevented $54 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $275,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

AUTHORIZATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Great Salt Plains Lake, OK

AUTHORIZATION: Flood Control Act of 1936

LOCATION AND DESCRIPTION: Great Salt Plains Lake is 12 miles east of the town of Cherokee in Alfalfa County, Oklahoma, and located on the Salt Fork of the Arkansas River at river mile 103.3. This is a multi-purpose project authorized for flood control, conservation, recreation, and fish and wildlife. The project consists of a rolled, earth fill embankment and concrete spillway with three ungated, concrete weirs. The embankment has a total crest length of 6,010 feet and rises to a maximum height of 68 feet above the streambed. At the top of the flood control pool the lake covers 25,660 acres.

FISCAL YEAR 2018 ALLOCATION: $356,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $295,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $66,000 **O:** $277,000 **T:** $343,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $257,000 – Funds will be used for commonly performed O&M work.

RC: $25,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $61,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Since construction in 1941, Great Salt Plains Lake is estimated to have prevented $328 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $83,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Heyburn Lake, OK

AUTHORIZATION: Flood Control Act of 1946

LOCATION AND DESCRIPTION: Heyburn Lake is 11 miles southwest of the City of Sapulpa in Creek County, Oklahoma. It is located at river mile 48.6 on Polecat Creek, a tributary of the Arkansas River. This is a multi-purpose project authorized for flood control, water supply, recreation, and fish and wildlife. The project consists of a 2,920 foot long rolled earth fill embankment with an uncontrolled spillway. At conservation pool depth the lake covers 877 acres.

FISCAL YEAR 2018 ALLOCATION: $740,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $2,602,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including repairing the dam embankment riprap.

BUDGETED AMOUNT FOR FY 2020: M: $129,000 **O:** $695,000 **T:** $824,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $435,000 – Funds will be used for commonly performed O&M work.

RC: $285,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $89,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1950, Heyburn Lake is estimated to have prevented $86,000,000 in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $45,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hugo Lake, OK

AUTHORIZATION: Flood Control Act of 1946

LOCATION AND DESCRIPTION: Hugo Lake is seven miles east of the City of Hugo in Choctaw County, Oklahoma, and located on the Kiamichi River at river mile 17.6. This is a multi-purpose project authorized for flood control, water supply, water quality, recreation, and fish and wildlife. The project consists of a 10,200 foot long rolled earth fill embankment with a gate controlled, concrete gravity ogee weir spillway with six gates. At conservation pool depth the lake covers 13,144 acres.

FISCAL YEAR 2018 ALLOCATION: $1,606,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,499,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of the project office roof.

BUDGETED AMOUNT FOR FY 2020: M: $223,000 **O:** $1,716,000 **T:** $1,939,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $981,000 – Funds will be used for commonly performed O&M work.

RC: $775,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $168,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1974, Hugo Lake is estimated to have prevented $321,000,000 in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $30,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hulah Lake, OK

AUTHORIZATION: Flood Control Act of 1936

LOCATION AND DESCRIPTION: Hulah Lake is 15 miles northwest of the City of Bartlesville in Osage County, Oklahoma. It is located at river mile 96.2 on the Caney River, a tributary of the Verdigris River. This is a multi-purpose project authorized for flood control, water supply, low flow regulation, and conservation. The project consists of a 10,200 foot long rolled earth fill embankment with a gate controlled, concrete gravity ogee weir spillway with ten tainter gates. At conservation pool depth the lake covers 3,120 acres.

FISCAL YEAR 2018 ALLOCATION: $1,398,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $751,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $468,000 **O:** $542,000 **T:** $1,010,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $775,000 – Funds will be used for commonly performed O&M work.

RC: $45,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $175,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1951, Hulah Lake is estimated to have prevented $1,8 billion in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $28,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Kaw Lake, OK

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Kaw Lake is eight miles east of the town of Ponca City in Kay County, Oklahoma, and located on the Arkansas River at river mile 653.7. This is a multi-purpose project authorized for flood control, water supply, water quality, hydropower, recreation, and fish and wildlife. The project consists of a 9,466 foot long rolled earth fill embankment with a gate controlled, concrete gravity ogee weir spillway with eight tainter gates. A 37 kilowatt hydropower generator is located at the project. At conservation pool depth the lake covers 16,750 acres.

FISCAL YEAR 2018 ALLOCATION: $2,374,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including replacement of a leaking water line at one of the project recreation areas.

FISCAL YEAR 2019 ALLOCATION: $2,693,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including designing repairs for a cracked spillway pier.

BUDGETED AMOUNT FOR FY 2020: M: $285,000 **O:** $2,103,000 **T:** $2,388,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,161,000 – Funds will be used for commonly performed O&M work.

RC: $880,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $332,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1977, Kaw Lake is estimated to have prevented $1.1 billion in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $36,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Keystone Lake, OK

AUTHORIZATION: River and Harbor Act of 1950

LOCATION AND DESCRIPTION: Keystone Lake is 15 miles west of Tulsa in Tulsa County, Oklahoma, and located on the Arkansas River at river mile 538.8. This is a multi-purpose project authorized for flood control, water supply, hydroelectric power, navigation, and fish and wildlife. The project consists of a 4,600 foot long rolled earth fill embankment with a concrete gated ogee weir controlled spillway with 18 tainter gates. The project contains two 35 megawatt hydropower generator units. At conservation pool depth the lake covers 23,610 acres.

FISCAL YEAR 2018 ALLOCATION: $5,022,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including to purchase and install a new sequential event recorder at the powerhouse.

FISCAL YEAR 2019 ALLOCATION: $4,494,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,126,000 **O:** $3,917,000 **T:** $5,043,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $481,000 – Funds will be used for commonly performed O&M work.

RC: $1,063,000 – Funds will be used for commonly performed O&M work.

H: $1,894,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection and certification activities for load handling equipment ($125,000).

EN: $460,000 – Funds will be used for commonly performed O&M work.

WS: $30,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1964, Keystone Lake is estimated to have prevented $1.7 billion in cumulative flood damages. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,115,000 shared between business lines as follows: FRM – 62%, NAV – 26%, HYD – 11%, and EN – 1%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $385,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: McClellan-Kerr Arkansas River Navigation System, OK

AUTHORIZATION: River and Harbor Act of 1946

LOCATION AND DESCRIPTION: The McClellan-Kerr Arkansas River Navigation System (MKARNS) provides a route from the Mississippi River through Arkansas and Oklahoma, to the head of navigation at the Port of Catoosa, near Tulsa, Oklahoma. The navigation channel has a minimum depth of 9 feet and minimum widths of 250 feet on the Arkansas River and 150 feet on the Verdigris River. Total length of the Tulsa District portion of the system is 137 navigation miles. The five locks on the project have chambers that are 110 by 600 feet with 20 to 21 foot normal lifts.

FISCAL YEAR 2018 ALLOCATION: $35,620,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities, Funds were also used for specific work activities including maintenance dredging; replacing the intake roller gate at Webbers Falls; installing new sequential event recorders at the powerhouses; purchasing new stoplogs for Robert S. Kerr; replacing the lock and spillway control wiring at Robert S. Kerr and Newt Graham Lock and Dam (L&D); replacing the lock control building roof at Chouteau and Robert S. Kerr L&D; replacing the directional valves at Chouteau L&D; upgrading the motor controllers for the spillway gates at Robert S. Kerr L&D; and repairing four tainter gates at Webbers Falls L&D.

FISCAL YEAR 2019 ALLOCATION: $26,602,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including maintenance dredging and tainter gate repairs at Webbers Falls and W.D. Mayo L&D.

BUDGETED AMOUNT FOR FY 2020: M: $7,198,000 **O:** $11,989,000 **T:** $19,187,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $11,616,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacing lock and dam control wiring ($1,200,000) and maintenance dredging ($1,000,000).

FRM: N/A

RC: $1,426,000 – Funds will be used for commonly performed O&M work.

H: $4,052,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including conducting load handling equipment and below the hook certifications ($250,000).

EN: $385,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Beginning with the FY 2017 budget, the Robert S. Kerr Lock and Dam project and the Webbers Falls Lock and Dam project have been combined with the MKARNS, OK project. Therefore, all of the business line amounts reflect the total for all three projects combined. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,708,000 shared between business lines as follows: NAV – 62%, HYD – 32%, REC – 5%; and EN – 1% for Robert S. Kerr and NAV – 72%, HYD – 16%, REC – 11%, and EN – 1% for Webbers Falls. Funds will be used commonly performed O&M work. Seven hydropower plants are on the project with a total hydropower capacity of 170,000 kilowatts.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $6,460,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Oologah Lake, OK

AUTHORIZATION: Flood Control Act of 1938

LOCATION AND DESCRIPTION: Oologah Lake is two miles southeast of the City of Oologah in Rogers County, Oklahoma, and located on the Verdigris River at river mile 90.2. This is a multi-purpose project authorized for flood control, water supply, navigation, recreation, and fish and wildlife. The project consists of a 4,000 foot long rolled earth fill embankment with a gate controlled, modified concrete gravity ogee weir spillway with seven radial gates. At conservation pool depth the lake covers 31,043 acres.

FISCAL YEAR 2018 ALLOCATION: $2,783,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including repairing damaged asphalt at the outlet works.

FISCAL YEAR 2019 ALLOCATION: $2,924,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $480,000 **O:** $2,624,000 **T:** $3,104,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,416,000 – Funds will be used for commonly performed O&M work.

RC: $868,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $805,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including preparing an update to the Master Plan ($400,000).

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1963, Oologah Lake is estimated to have prevented $1.3 billion in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $148,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Optima Lake, OK

AUTHORIZATION: Flood Control Act of 1936, as amended by the Flood Control Act of 1950

LOCATION AND DESCRIPTION: Optima Lake is 4.5 miles northeast of the City of Hardesty in Texas County, Oklahoma and located on the North Canadian River at river mile 623.2. This is a multi-purpose project authorized for flood control, water supply, recreation, and fish and wildlife. The project consists of a 16,900 foot long rolled earth fill embankment with an uncontrolled emergency spillway. At conservation pool depth the lake covers 5,340 acres.

FISCAL YEAR 2018 ALLOCATION: $60,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $62,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $4,000 **O:** $91,000 **T:** $95,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $95,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Funds are sufficient to ensure the safety, security, and integrity of the project. In order to reduce annual Civil Works O&M costs, 12,400 acres of the 13,250 acres of Federal lands at Optima Lake are being managed by the U.S. Fish and Wildlife Service and the Oklahoma Department of Wildlife Conservation under licensing and cooperative agreements.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $18,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pensacola Reservoir, Lake of the Cherokees, OK

AUTHORIZATION: Flood Control Act of 1941

LOCATION AND DESCRIPTION: Pensacola Reservoir, Lake of the Cherokees, is 13 miles southeast of the town of Vinita in Mayes and Delaware Counties, Oklahoma, and located on the Grand (Neosho) River at river mile 77. This is a multi-purpose project authorized for hydropower and flood control. The project consists of a concrete, multiple-arch dam with gated spillways. The total length of the dam and spillways is 6,565 feet. The main spillway and the two east spillways are equipped with 21 tainter gates. A total of six 20-megawatt hydropower generators owned and maintained by the Grand River Dam Authority are located within the structure. At power pool depth the lake covers 46,500 acres.

FISCAL YEAR 2018 ALLOCATION: $163,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $162,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $7,000 **O:** $153,000 **T:** $160,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $160,000 – Funding will be used for commonly perfomed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: This project was constructed by the Grand River Dam Authority, an Oklahoma State agency, in 1940. Operation of the flood control storage in the reservoir is the responsibility of the Corps in accordance with the provisions of Section 7 of the Flood Control Act of 1944.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $23,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pine Creek Lake, OK

AUTHORIZATION: Flood Control Act of 1958

LOCATION AND DESCRIPTION: Pine Creek Lake is five miles northwest of the town of Wright City in McCurtain County, Oklahoma, and located on the Little River at river mile 145.3. This is a multi-purpose project authorized for flood control, water supply, water quality, fish and wildlife, and recreation. The project consists of a 7,712 foot long rolled earth fill embankment with an uncontrolled, gravity ogee weir spillway. The outlet works includes an intake structure, a 13-foot diameter conduit, and 48-inch low flow pipe, and a 36-inch water supply static head line. At conservation pool depth the lake covers 3,750 acres.

FISCAL YEAR 2018 ALLOCATION: $1,425,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $1,654,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $118,000 **O:** $1,337,000 **T:** $1,455,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $702,000 – Funds will be used for commonly performed O&M work.

RC: $516,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $202,000 – Funds will be used for commonly performed O&M work.

WS: $35,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1969, Pine Creek Lake is estimated to have prevented $166 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,320,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Sardis Lake, OK

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Sardis Lake is 2.5 miles north of the City of Clayton in Pushmataha County, Oklahoma, and located at river mile 2.8 on Jackfork Creek, a tributary of the Kiamichi River. This is a multi-purpose project authorized for flood control, water supply, recreation, and fish and wildlife. The project consists of a 14,138 foot long rolled earth fill embankment with an uncontrolled spillway and a gate tower with two wheel gates. At conservation pool depth the lake covers 13,610 acres.

FISCAL YEAR 2018 ALLOCATION: $2,223,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities. Funds were also used for specific work activities including repairs to the conduit joints and embankment toe drain.

FISCAL YEAR 2019 ALLOCATION: $1,272,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $1,390,000 **O:** $1,138,000 **T:** $2,528,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,798,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairs to the emergency gate and wet well actuators ($1,370,000).

RC: $530,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $170,000 – Funds will be used for commonly performed O&M work.

WS: $30,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1983, Sardis Lake is estimated to have prevented $140 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $208,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Skiatook Lake, OK

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Skiatook Lake is five miles west of the town of Skiatook in Osage County, Oklahoma, and located at river mile 14.3 on Hominy Creek, a tributary of Bird Creek. This is a multi-purpose project authorized for flood control, water supply, water quality control, recreation, and fish and wildlife. The project consists of a 3,590 foot long rolled earth fill embankment with an uncontrolled spillway and a gate tower with two gates. At conservation pool depth the lake covers 10,190 acres.

FISCAL YEAR 2018 ALLOCATION: $1,979,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,723,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $312,000 **O:** $1,170,000 **T:** $1,482,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $539,000 – Funds will be used for commonly performed O&M work.

RC: $685,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $223,000 – Funds will be used for commonly performed O&M work.

WS: $35,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1984, Skiatook Lake is estimated to have prevented $651 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,356,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tenkiller Ferry Lake, OK

AUTHORIZATION: Flood Control Act of 1938

LOCATION AND DESCRIPTION: Tenkiller Ferry Lake is 22 miles southeast of the City of Muskogee in Cherokee and Sequoyah Counties, Oklahoma, and located on the Illinois River at river mile 12.8. This is a multi-purpose project authorized for flood control and hydropower. The project consists of a 3,000 foot long rolled earth fill embankment with a concrete, gravity controlled spillway with ten tainter gates. The project contains two 19.5 megawatt hydropower generator units. At conservation pool depth the lake covers 12,900 acres.

FISCAL YEAR 2018 ALLOCATION: $4,832,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including installation of a new sequential event recorder in the powerhouse.

FISCAL YEAR 2019 ALLOCATION: $4,275,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $733,000 **O:** $4,036,000 **T:** $4,769,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $299,000 – Funds will be used for commonly performed O&M work.

RC: $1,686,000 – Funds will be used for commonly performed O&M work.

H: $1,647,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection and certification activities for load handling equipment ($125,000).

EN: $473,000 – Funds will be used for commonly performed O&M work.

WS: $50,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1952, Tenkiller Ferry Lake is estimated to have prevented $342 million in cumulative flood damages. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $614,000 shared between business lines as follows: FRM – 65% and HYD -35%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $257,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Waurika Lake, OK

AUTHORIZATION: P.L. 88-253

LOCATION AND DESCRIPTION: Waurika Lake is six miles northwest of the town of Waurika in Jefferson County, Oklahoma, and located at river mile 27.0 on Beaver Creek, a tributary of the Red River. This is a multi-purpose project authorized for flood control, irrigation, water supply, water quality, recreation, and fish and wildlife. The project consists of a 16,600 foot long rolled earth fill embankment with an uncontrolled spillway. The outlet works include a concrete conduit with two service gates and two emergency gates, a water supply pipe, and a low flow pipe. At conservation pool depth the lake covers 10,100 acres.

FISCAL YEAR 2018 ALLOCATION: $1,614,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,840,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including preparation of a bridge load rating, a crane placement plan, and replacement of a leaking water line in Kiowa Park I.

BUDGETED AMOUNT FOR FY 2020: M: $401,000 **O:** $1,203,000 **T:** $1,604,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $821,000 – Funds will be used for commonly performed O&M work.

REC: $610,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $148,000 – Funds will be used for commonly performed O&M work.

WS: $25,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1977, Waurika Lake is estimated to have prevented $315 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $36,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Wister Lake, OK

AUTHORIZATION: Flood Control Act of 1938

LOCATION AND DESCRIPTION: Wister Lake is located on the Poteau River at river mile 60.9, two miles south of the town of Wister in LeFlore County, Oklahoma. This is a multi-purpose project authorized for flood control, water supply, low flow augmentation, water conservation, and sedimentation control. The project consists of a 5,700 foot long rolled earth fill embankment with an uncontrolled, concrete, chute-type spillway with a modified broad-crested weir. Flows are regulated by six vertical lift gates located in a concrete gate tower. At conservation pool depth the lake covers 7,386 acres.

FISCAL YEAR 2018 ALLOCATION: $773,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $781,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $171,300 **O:** $729,000 **T:** $900,300 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $637,000 – Funds will be used for commonly performed O&M work.

RC: $52,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $196,300 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1949, Wister Lake is estimated to have prevented $953 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $126,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Applegate Lake, OR

AUTHORIZATION: The Flood Control Act of 1962 (PL 87-874)

LOCATION AND DESCRIPTION: The project is 23.5 miles south of Medford in southwestern Oregon near river mile 46.5 on the Applegate River. Applegate Lake is a flood reduction project with rock-fill embankment dam, 1300-feet long and 242-feet high, with a gate-controlled, concrete spillway, a regulating outlet conduit, an intake tower with multi-level intakes, and a reservoir. In addition to flood control, the reservoir is authorized for irrigation, fish and wildlife enhancement, water quality control, and recreation.

FISCAL YEAR 2018 ALLOCATION: $1,073,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,032,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $125,000 **O:** $1,141,000 **T:** $1,266,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,238,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $28,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project provides 75 thousand acre-feet of usable storage for flood control and water conservation utilization. The project controls runoff from a drainage area of 223 square-miles.

1/Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $12,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Blue River Lake, OR

AUTHORIZATION: The Flood Control Act of 1950 (PL 81-51)

LOCATION AND DESCRIPTION: Blue River Lake is 38 miles east of Eugene on the Blue River in Oregon. It consists of a rock-fill embankment dam, 1420-feet long, 319-feet high, a spillway 70-feet long, outlet works, and an earthen- and gravel-fill dike that is 1535-feet long. Blue Lake Dam is about two miles from the mouth of the Blue River on the McKenzie River.

FISCAL YEAR 2018 ALLOCATION: $515,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including non-routine Generic Data Acquisition and Control Systems (GDACS).

FISCAL YEAR 2019 ALLOCATION: $1,004,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $169,000 **O:** $924,000 **T:** $1,093,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $957,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities uncluding GDACS, $60,000, and Regulating Outlet Fence, $37,000.

RC: $22,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $110,000 – Funds will be used for commonly performed O&M work.

WS: $4,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: This project controls runoff from a drainage area of 88 square-miles. The reservoir provides 85 thousand acre-feet of usable flood control storage and is operated in conjunction with the coordinated reservoir system to protect the Willamette River Valley and provide increased low water flows for navigation and other purposes.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,311,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bonneville Lock and Dam, OR & WA 2/

AUTHORIZATION: Works Progress Administration of 1933, 16 US Code Section 832 (Bonneville Project Act), River and Harbors Act of 1935 (PL 74-409), as amended, Flood Control Act of 1948 (PL 81-516), and Water Resources Development Act of 1974 (PL 93-251)

LOCATION AND DESCRIPTION: Bonneville Lock and Dam is 145 river miles from the mouth of the Columbia River, 42-miles east of Portland, near Cascade Locks, Oregon. It is authorized for navigation, flood control, hydropower, fish and wildlife, and recreation. It has two powerhouses with 20 hydropower generators with a combined capacity of 1077 megawatts, a fish hatchery, a regional visitor center, and fish ladders.

FISCAL YEAR 2018 ALLOCATION: $1,782,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work, management of recreation facilities, and management for the environmental stewardship.

FISCAL YEAR 2019 ALLOCATION: $2,064,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $55,000 **O:** $1,864,000 **T:** $1,919,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $1,559,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M and specific work activities for hydropower are direct funded by the Bonneville Power Administration.

EN: $360,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: This project provides a spillway dam with overflow crest at 24 feet above mean sea level. It has two powerhouses consisting of 18 units and two fish attraction units for a total power generation capacity of 1,145.7 megawatts. Fish ladders serve the main channel, Bradford Slough Channel, and Powerhouse II channel. The project also provides for navigation with a lock chamber, 86-feet wide with a 19-foot depth of water over the sill.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $199,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cottage Grove Lake, OR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Cottage Grove Lake is 25 miles southeast of Eugene, OR on the Coast Fork of the Willamette River at river-mile 29. The project is authorized for flood reduction, recreation, and environmental stewardship. It consists of an earthen-fill dam, 1750-feet long, with a 264-foot long, concrete, gravity spillway, three gate-controlled outlet works, and recreation sites.

FISCAL YEAR 2018 ALLOCATION: $2,137,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including replacement of Shortridge Park restroom, installation of a Generic Data Acquisition Control System (GDACS), seepage and stability evaluation, and installation of piezometers.

FISCAL YEAR 2019 ALLOCATION: $1,248,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $249,000 **O:** $1,267,000 **T:** $1,516,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $932,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including environmental impact statement for NEPA compliance, $59,000, and GDACS, $60,000.

RC: $374,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $206,000 – Funds will be used for commonly performed O&M work.

WS: $4,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The reservoir provides 30 thousand acre-feet of usable flood control storage and controls the runoff of a drainage area of 104 square miles. The project is operated as a part of the coordinated reservoir system that protects the Willamette River Valley and provides increased low water flow for navigation and for other purposes. Recreational development consists of day use and overnight facilities at five sites operated by the Corps of Engineers.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $293,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cougar Lake, OR

AUTHORIZATION: Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: Cougar Lake and Dam are on the South Fork McKenzie River, 42 miles east of Eugene, Oregon. It is a multi-purpose project with a large dam, spillway, and a powerhouse with two 12.5 megawatt hydropower generators.

FISCAL YEAR 2018 ALLOCATION: $2,478,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,343,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,781,000 **O:** $2,205,000 **T:** $3,986,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $24,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M for hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $110,000 – Funds will be used for commonly performed O&M work.
.
WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $3,844,000 share between business lines as follows: NAV – 1%, FRM – 91%, and WS – 8%. Reservoir is 6 miles long with storage capacity at full pool of 219,000 acre-feet and controls runoff of tributary streams. Power plant consists of two 12,500-kilowatt units.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $362,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Detroit Lake, OR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Detroit Lake and Dam are on North Santiam River 45 miles southeast of Salem, Oregon. It is a multi-purpose project with hydropower. It consists of two dams, spillways, and recreation sites. The main dam has two 50-megawatt hydropower generators, and the downstream re-regulating dam, Big Cliff, has one 18-megawatt generator.

FISCAL YEAR 2018 ALLOCATION: $5,612,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were being used for routine operation and maintenance (O&M). Funds were also used for specific work activities including repair of structural deformities on spillway gate #6 and mechanical and electrical repairs on spillway gates #5 and #6.

FISCAL YEAR 2019 ALLOCATION: $5,835,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including repair of structural deformities on spillway gate #5 and electrical/mechanical reliability repairs for spillway gates #4 and #3.

BUDGETED AMOUNT FOR FY 2020: M: $128,000 **O:** $926,000 **T:** $1,054,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $29,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $62,000 – Funds will be used for commonly performed O&M work.

WS: $12,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $951,000 shared between business lines as follows: NAV – 1%, FRM – 83%, and WS – 16%. Funds will be used for commonly performed O&M work. The main and re-regulating dam powerhouses combined have three units with a total capacity of 118-megawatts. The reservoir has a storage capacity of 455 thousand acre-feet and controls runoff of a tributary drainage area of 438-square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $988,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Dorena Lake, OR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Dorena Lake is 20 miles southeast of Eugene, OR on the Row River at river-mile seven. It consists of an earthen-fill dam, 3352-feet long, 131-feet high, a 200-foot long spillway, outlet works with five conduits, a reservoir, and recreation sites.

FISCAL YEAR 2018 ALLOCATION: $2,250,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including installing Generic Data Acquisition Control Systems (GDACS) and repair and upgrade the regulating outlets' hydraulics and gates.

FISCAL YEAR 2019 ALLOCATION: $1,268,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $214,000 **O:** $1,285,000 **T:** $1,499,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,005,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including environmental impact statement for NEPA compliance, $59,000, and GDACS, $60,000.

RC: $299,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $191,000 – Funds will be used for commonly performed O&M work.

WS: $4,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The reservoir provides 70.5 thousand acre-feet of usable flood control storage and controls runoff from a basin of 265-square miles. The project is operated as a part of the coordinated reservoir system to protect the Willamette River Valley and provides increased low water flows for navigational and other purposes.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $504,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Elk Creek Lake, OR

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874), as amended

LOCATION AND DESCRIPTION: Elk Creek Lake is 26.5 miles north of the City of Medford, OR and located in Jackson County at river-mile 1.7 on Elk Creek, a tributary of Rogue River. Elk Creek Dam was partially completed prior to a court injunction stopping construction.

FISCAL YEAR 2018 ALLOCATION: $335,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $172,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $203,000 **O:** $102,000 **T:** $305,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $16,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $289,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Elk Creek boundary fence ($135,000) and Western boundary fence installation ($140,000).

WS: N/A

OTHER INFORMATION: The dam was partially demolished ("notched") in 2008 and restored the creek to its original channel to allow for fish passage.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $23,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fall Creek Lake, OR

AUTHORIZATION: Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: The project is 19 miles southeast of Eugene, Oregon, on Fall Creek. The project is authorized for flood reduction and recreation. It consists of a 5,100-foot long and 180-ft high dam, a gate-controlled spillway, a stilling basin, a reservoir, and recreation sites.

FISCAL YEAR 2018 ALLOCATION: $1,954,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including a Generic Data Acquisition Control System.

FISCAL YEAR 2019 ALLOCATION: $1,467,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $247,000 **O:** $1,257,000 **T:** $1,504,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,214,000 – Funds will be used for commonly performed O&M work.

RC: $40,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $246,000 – Funds will be used for commonly performed O&M work.

WS: $4,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The reservoir provides 115 thousand acre-feet of usable flood control storage and is operated as a part of the coordinated reservoir system to protect the Willamette River Valley and provide increased low water flows for navigation and other purposes.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $483,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fern Ridge Lake, OR

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: The project is ten miles west of Eugene, OR on the Long Tom River at river-mile 24. It is authorized for flood reduction, environmental stewardship, and recreation. It consists of a 6,330-foot long earthen-fill dam, two auxiliary dikes, a spillway with six automatic radial gates, outlet works in the spillway structure, a reservoir, and recreation sites. The Federal project also includes the Long Tom River Channel downstream of dam.

FISCAL YEAR 2018 ALLOCATION: $2,179,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including emergency diesel generator rehab and a Generic Data Acquisition Control System.

FISCAL YEAR 2019 ALLOCATION: $2,007,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $184,000 **O:** $1,894,000 **T:** $2,078,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,514,000 – Funds will be used for commonly performed O&M work.

RC: $103,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $455,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including Shoreline Management Plan Review and Update ($41,000).
.
WS: $6,000 **– Funds** will be used for commonly performed O&M work.

OTHER INFORMATION: The reservoir provides 110 thousand acre-feet of usable flood control storage and controls runoff of tributary drainage area of 275 square-miles. The reservoir protects the Long Tom River Valley and is operated as a part of the coordinated reservoir system to protect the Willamette River.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $351,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Green Peter and Foster Lake, OR

AUTHORIZATION: Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: Green Peter Dam is 35 miles northeast of Eugene, Oregon, on the middle fork of the Santiam River. Foster Lake is seven miles downstream from Green Peter Lake. The project is multi-purpose with hydropower. It consists of the main dam, Green Peter, a re-regulating dam, Foster, spillways, and recreation sites. Green Peter hydropower facilities consist of two 40-megawatt generators, and Foster has two 10-megawatt units.

FISCAL YEAR 2018 ALLOCATION: $2,258,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,139,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $344,000 **O:** $2,287,000 **T:** $2,631,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $210,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $278,000 – Funds will be used for commonly performed O&M work.

WS: $24,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $2,119,000 shared between business lines as follows: NAV – 1%, FRM – 87%, and WS – 12%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including plans and specifications to replace water stops in main dam ($87,000). Together, the main dam and re-regulating dam, both with power-generating facilities, have an installed capacity of 100,000 kilowatts. Reservoirs provide storage capacity at full pool of 491 thousand acre-feet and control runoff of tributary drainage area of 277 square-miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $82,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hills Creek Lake, OR

AUTHORIZATION: The Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: Hills Creek Dam is 45-miles southeast of Eugene, OR on the Middle Fork of the Willamette River. The project is multi-purpose with hydropower, and consists of a dam, a spillway, recreation facilities, and a powerhouse with two 15-megawatt generators.

FISCAL YEAR 2018 ALLOCATION: $1,225,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,468,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $81,000 **O:** $1,360,000 **T:** $1,441,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $21,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $163,000 – Funds will be used for commonly performed O&M work.

WS: $12,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,245,000 shared between business lines as follows: NAV – 2%, FRM – 83%, and WS – 15%. Funds will be used for commonly performed O&M work. Storage capacity at full pool is 356 thousand acre-feet. Project controls runoff of a drainage area of 389 square miles and is an integral unit of the comprehensive plan for development of the water resources of Willamette River Basin.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $521,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: John Day Lock and Dam, OR and WA

AUTHORIZATION: Rivers and Harbors and Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: The John Day project is on the Columbia River, 112 miles east of Portland, Oregon. The project is multi-purpose with hydropower and is part of the Federal Columbia River Power System. It consists of one dam, spillways, fish passage, a navigation lock, a powerhouse with sixteen 135-megawatt generators, and recreation sites.

FISCAL YEAR 2018 ALLOCATION: $5,937,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including a below the hook lifting device compliance assessment and a spillway hydraulic steel safety inspection.

FISCAL YEAR 2019 ALLOCATION: $5,631,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,211,000 **O:** $4,753,000 **T:** $5,964,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,073,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: $954,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $472,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a boundary survey ($69,000).

WS: N/A

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $3,465,000 shared between business lines as follows: NAV – 76% and FRM – 24%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including security risk assessment ($14,000). The locks are part of the Columbia and Snake River navigation system that extends from the mouth of the Columbia River to Lewiston, ID. The project provides 500 thousand acre-feet of flood control storage between river-elevations 257 and 268. The powerhouse has bays for 20 generating units of 135-megawatts each, but only 16 units have been installed for a present capacity of 2,160-megawatts. John Day Powerhouse is the second largest powerhouse in the USACE and generated 9,210,000 megawatt-hours of electricity in FY 2018, enough for 850,000 homes.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 to FY 2019 was $1,006,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lookout Point Lake, OR

AUTHORIZATION: Flood Control Acts, 1944, P.L. 75-761, 1950, PL. 81-516

LOCATION AND DESCRIPTION: Lookout Point Dam is 22 miles southeast of Eugene in Lowell, Oregon, on the Middle Fork of the Willamette River. The project is multi-purpose with hydropower consisting of two dams, spillways, and recreation sites. The main dam, Lookout Point, has three 40-megawatt generators, and the downstream, re-regulating dam, Dexter, has one 15-megawatt generator.

FISCAL YEAR 2018 ALLOCATION: $2,337,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,031,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $102,000 **O:** $2,085,000 **T:** $2,187,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $185,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $180,000 – Funds will be used for commonly performed O&M work.

WS: $12,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,810,000 shared between business lines as follows: NAV – 2%, FRM – 95%, and WS – 3%. Funds will be used for commonly performed O&M work. The main dam reservoir provides storage of 456 thousand acre-feet at full-pool level. The re-regulating dam forms a full pool of 27.5 thousand acre-feet. Reservoirs control runoff of a tributary drainage area of 991 square-miles. Generation from the hydropower facilities totaled 304,400 megawatt-hours for FY 2018, enough for 27,600 homes.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $140,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lost Creek Lake, OR

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: The project is 27 miles northeast of Medford, OR on the upper Rogue River. The multi-purpose project with hydropower consists of a dam, a spillway, a powerhouse with two 24.5-megawatt generators, and recreation sites.

FISCAL YEAR 2018 ALLOCATION: $3,471,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $3,585,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $143,000 **O:** $3,719,000 **T:** $3,862,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $343,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $304,000 – Funds will be used for commonly performed O&M work.

WS: $44,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $3,171,000 shared between business lines as follows: FRM – 46%, ENS – 23%, REC – 24%, and WS – 7%. The powerhouse with 49-megawatts of capacity generated 246,000 megawatt-hours of electricity in FY 2018, enough for 23,000 homes. This project has a regulating outlet with provisions for temperature regulation of releases for fishery enhancement. The reservoir is ten-miles long and provides 315 thousand acre-feet of usable storage. The runoff from a drainage area of 674 square-miles is controlled by the project.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $46,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: McNary Lock and Dam, OR & WA

AUTHORIZATION: Section 2 of the River and Harbor Act of 1945 (P.L. 79-14)

LOCATION AND DESCRIPTION: Project is located in Central Oregon on the Columbia River near Umatilla, Oregon. The project is part of the Federal Columbia River Power System. The project includes the dam, a powerhouse with a capacity of 980 Megawatts, a navigation lock with a vertical lift of 75 feet, high-use waterway, two fish ladders, a system of levees and pumping plants, a reservoir that has a water surface area of 38,800 acres, 16,908 acres of land that provides recreation facilities and wildlife mitigation habitat, juvenile fish holding, loading, and bypass facilities.

FISCAL YEAR 2018 ALLOCATION: $12,912,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including for the continuing work on the major crack and structural repairs to the downstream miter gate; for tainter valves 1 and 3 replacement; design to replace and upgrade the navigation lock electrical and controls; design to replace the navigation lock derrick crane; for the rehabilitation of nine of the fifteen levee pumping plants; for the redesign, procure and install 20 new spillway hoist systems and rehab 9 spillway gates; and for the design phase of the attraction water fish pumps replacement.

FISCAL YEAR 2019 ALLOCATION: $9,527,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including installation of three attraction water fish pumps, a security assessment, updating the project EIS, and completion of a major maintenance report for the Washington and Oregon fish ladder.

BUDGETED AMOUNT FOR FY 2020: M: $6,099,000 **O:** $3,805,000 **T:** $9,904,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $3,019,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including continuing crack and structural repairs to the downstream miter gate ($550,000) and periodic inspections ($21,000).

FRM: N/A

RC: $1,467,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $284,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $5,134,000 shared between business lines as follows: NAV – 100%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities include the continued rehabilitation of eleven of the fifteen levee pumping plants ($927,000), replace three ladder attraction water fish pumps ($1,000,000) and connect the septic tanks to the city of Umatilla sewer system ($374,000). Traffic through the navigation lock consists of grain, petroleum

products, fertilizer, wood products and miscellaneous cargo that amount to more than 5.3 million tons in 2018. There are 16.9 thousand acres of land that are utilized for public recreation purposes, wildlife habitat, wildlife mitigation and water connected industrial development.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $4,899,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Willamette River at Willamette Falls, OR

AUTHORIZATION: Rivers and Harbors Act of 1910 (P.L. 61-264)

LOCATION AND DESCRIPTION: Willamette Falls Locks is an inoperable, multiple-lift navigation lock located on the Willamette River in West Linn, Oregon.

FISCAL YEAR 2018 ALLOCATION: $111,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for caretaker work necessary to maintain the project in a safe condition.

FISCAL YEAR 2019 ALLOCATION: $659,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for for caretaker functions and dam safety work. Funds are also being used for specific work activities including a design documentation reprt and plans and specifications for disposition recommendation measures.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $65,000 **T:** $65,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $65,000 – Funds will be used for for caretaker functions and dam safety work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A
.
WS: N/A

OTHER INFORMATION: The project includes four locks, a canal basin, and an extra guard lock used to prevent flooding when river levels are high. The system acts as a fluid staircase between the upper and lower reaches of the Willamette River. Due to structural/safety concerns, the project is inoperable and maintained in a caretaker status.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $34,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Willamette River Bank Protection, OR

AUTHORIZATION: Flood Control Acts of 1936 (authorizes bank protection and channel clearing), 1938 (PL. 75-685, added flood protection), 1950 (PL. 81-519, added an additional 77 locations)

LOCATION AND DESCRIPTION: This Federal project provides 90 miles of bank protection, drift embankments, drift barriers, and channel improvements at 223 locations along the Willamette River and its tributaries from river-mile 25 to 225.

FISCAL YEAR 2018 ALLOCATION: $198,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to identify potential restoration sites associated with existing Corps revetments in the Willamette Basin; perform site inspections; and maintain the inventory and inspection database.

FISCAL YEAR 2019 ALLOCATION: $168,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for specific work activities, including to identify potential restoration sites associated with existing Corps revetments in the Willamette Basin; perform site inspections; and maintain the inventory and inspection.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $203,000 **T:** $203,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $203,000 – Funds will be used for commonly performed operation and maintenance work. Funds will be used for specific activities, including to identify potential restoration sites associated with existing Corps revetments in the Willamette Basin.

RC: N/A

H: N/A

EN: N/A
.
WS: N/A

OTHER INFORMATION: The program consists of 223 federally constructed projects that were authorized to clear and revet river banks, construct bulkheads, and minor channel improvements. The project also maintains existing works constructed under the 1936 and 1938 Flood Control Acts for control of floods and preventing erosion at various locations along the Willamette River and tributaries.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $4,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Willow Creek Lake, OR

AUTHORIZATION: Flood Control Act of 1965 (P.L. 89-298)

LOCATION AND DESCRIPTION: The project is on Willow Creek at Heppner, Oregon. It is authorized for flood reduction. It consists of a roller-compacted, concrete dam, an uncontrolled spillway, outlet works, diversion works, and a reservoir.

FISCAL YEAR 2018 ALLOCATION: $1,472,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including the repair and upgrade of the automated monitoring system.

FISCAL YEAR 2019 ALLOCATION: $741,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $306,000 **O:** $707,000 **T:** $1,013,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $940,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $73,000 – Funds will be used for commonly performed O&M work.
.
WS: N/A

OTHER INFORMATION: Project provides flood protection to the City of Heppner and downstream areas by controlling runoff from a drainage area of 96-square miles. Gross storage capacity of the project is 13 thousand acre-feet, consisting of 7.75 thousand acre-feet for exclusive flood control, 1.75 thousand acre-feet for joint flood control and irrigation, 1.75 thousand acre-feet exclusive irrigation, and 2 thousand acre-feet for fish, wildlife, recreation, sediment accumulation, and aesthetics.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $20,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Allegheny River, PA

AUTHORIZATION: Rivers and Harbors Act 1912 and 1935; Emergency Relief Administration program 1935

LOCATION AND DESCRIPTION: The project consists of the navigable portion of the Allegheny River, a low-use waterway, which extends northeastward 72 miles from its mouth at the Point in Pittsburgh to East Brady, PA. Commercial and recreational navigation is provided from eight locks and dams that are Locks and Dams 2 thru 9 within the 72-mile reach of river, including the CW Bill Young (CWBY) Lock and Dam (formerly Lock and Dam 3).

FISCAL YEAR 2018 ALLOCATION: $18,914,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of eight navigation locks and dams that provide approximately 72 miles of navigable river. Funds were also used to perform dredging to maintain the navigation channel, conduct replacement of the timber seals on the miter and quoin blocks at Lock and Dam 4, fabricate and install safety waterway signs at Locks and Dams 6 and 7, complete plans and specifications for waterway safety signs at Lock and Dam 2 and C.W. Bill Young Lock and Dam, perform concrete repairs to the vertical land wall at Lock and Dam 2 and signage was installed on fixed crest dams.

FISCAL YEAR 2019 ALLOCATION: $9,384,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including navigation safety sign installation at Lock and Dam 2, C.W. Bill Young Lock and Dam, Lock and Dam 6 and Lock and Dam 7; completion of concrete repairs to the vertical land wall at Lock and Dam 2; dam safety inspections; and dredging activities.

BUDGETED AMOUNT FOR FY 2020: M: $2,128,000 **O:** $5,049,000 **T:** $7,177,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $7,177,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

HYD: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The Allegheny River locks have various operating hours dictated by commercial navigation traffic levels. Lock 2 and CW Bill Young will be operated twenty-four hours a day and seven days a week. Locks 4 and 5 will be operated 7:00 am to 11:00 pm, seven days per week. Locks 6, 7, 8, and 9 will only be available for commercial navigation lockages by appointment.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $3,207,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Alvin R. Bush Dam, PA

AUTHORIZATION: Flood Control Act of 1954 and described in House Document 29, 84th Congress, 1st Session

LOCATION AND DESCRIPTION: Alvin R. Bush Dam is located on Kettle Creek approximately 8.4 miles above the mouth and about 15 miles above Renovo, Pennsylvania, in Clinton County. The earthen- and rock-fill dam has a maximum height of 165 feet above the streambed and a top length of 1,350 feet. The outlet works include a horseshoe-shaped tunnel, 13 feet in diameter, with 3 service gates. The spillway is uncontrolled and located in rock adjacent to the right abutment. The reservoir has a storage capacity of 75,000 acre-feet at spillway crest, and the pool at this elevation extends upstream for a distance approximately 8.8 miles. The permanent pool covers 160 acres and extends for 2.2 miles. The project controls a drainage area of 226 square-miles or about 92-percent of the Kettle Creek watershed.

FISCAL YEAR 2018 ALLOCATION: $960,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M), a periodic inspection, underwater inspection, HSS inspection and an engineering study of the spillway channel wall rock erosion.

FISCAL YEAR 2019 ALLOCATION: $865,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including an HSS assessment and the demo and disposal of the dam tender residence.

BUDGETED AMOUNT FOR FY 2020: M: $476,000 **O:** $573,000 **T:** $1,049,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,006,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an updated sedimentation survey and the design, plans, specs for the spillway channel wall rock erosion.

RC: $18,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $25,000 –Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The recreation facilities are operated and maintained by the Commonwealth of Pennsylvania, Department of Conservation and Natural Resources as Kettle Creek State Park under a real estate agreement. Operation of the project provides benefit to a population at risk of 125,000.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $211,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Aylesworth Creek Lake, PA

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-874) and described in Senate Document 141, 87th Congress, 2nd Session.

LOCATION AND DESCRIPTION: Aylesworth Creek Lake is in Archbald Borough, Pennsylvania, on Aylesworth Creek, one mile above its confluence with the Lackawanna River. The earthen- and rock-fill dam has a maximum height above the streambed of 90 feet and a top length of 1,270 feet. An 80-foot wide spillway, having a discharge capacity of 10,000 cubic-feet-per-second, was cut in the south bank. The outlet conduit is uncontrolled and consists of a 490-foot long, 36-inch diameter vitrified clay pipe encased in reinforced concrete. An auxiliary dike was required on the north bank of Aylesworth Creek to prevent flow from the lake into the Mayfield Creek drainage basin during high lake elevations. The dike is 410-feet long and has a maximum height of 28 feet. The reservoir extends about 4,600-feet upstream and inundates 87 acres at spillway crest with an elevation of 1,150 feet above mean sea level.

FISCAL YEAR 2018 ALLOCATION: $618,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M). Funds were also used for specific work activities including a periodic assessment and inspection including an underwater inspection and HSS inspection.

FISCAL YEAR 2019 ALLOCATION: $412,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $120,000 **O:** $239,000 **T:** $359,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $334,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including monumentation replacement and design, plans, specs for Mayfield dike toe drain replacement.

RC: $11,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $14,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Lackawanna County operates and maintains Aylesworth Park under a real estate agreement. Operation of the project provides benefit to a population at risk of 280,000.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $221,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Beltzville Lake, PA

AUTHORIZATION: House Document 622, 87th Congress, 2nd Session (1962)

LOCATION AND DESCRIPTION: The project is located on Pohopoco Creek, a tributary of the Lehigh River, about 4.5 miles from the confluence with the Lehigh River and 4 miles east of Lehighton, Pennsylvania. Project purposes are flood control, recreation, and water supply. The project consists of a flood control, zoned earthen-fill embankment, a controlled outlet works and an open channel emergency spillway. The controlled reservoir capacity is 68,250 acre-feet as a spillway crest, with 1,390 acre-feet of inactive storage, 41,200 acre-feet for water supply, water quality control and recreation. The Commonwealth of Pennsylvania manages, under leases, the recreation facilities constructed by the Corps and the remainder of the project lands. The Corps manages the overlook and visitor center and the lands immediately adjacent to the dam structure.

FISCAL YEAR 2018 ALLOCATION: $1,292,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR FY 2019 ALLOCATION: $1,625,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary monumentation, pest and invasive species maintenance, and to provide safe demolition of barn building and remove debris from the property.

BUDGETED AMOUNT FOR FY 2020: M: $700,000 **O:** $1,181,000 **T:** $1,881,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,856,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairing the hydraulic steel structure ($400,000) and seal pipes in intake tower ($220,000).

RC: N/A

H: N/A

EN: $25,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $651,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Blue Marsh Lake, Pennsylvania

AUTHORIZATION: House Document 522, 87th Congress, 2nd Session (1962)

LOCATION AND DESCRIPTION: The project is located on Tulpehocken Creek, a tributary of the Schuylkill River, about 6 miles northwest of Reading, Pennsylvania. The project consists of an earthen- and rock-fill dam with a spillway, a low level outlet works, three high level saddle dikes located in low points in the reservoir rim, and a levee and interior drainage system to protect the settlement of Bernville, Pennsylvania northwest of the Blue Marsh Dam.

FISCAL YEAR 2018 ALLOCATION: $3,059,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $3,646,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repair bulkheads, replace equipment at Bernville pump station, wildlife and habitat management, and perform energy audit and install insulation and geothermal units in Rangers Operations Building and Conference Center.

BUDGETED AMOUNT FOR FY 2020: M: $419,000 **O:** $2,421,000 **T:** $2,840,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $915,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repair hydraulic leaks in intake structure and flush the hydraulic system ($12,000), and repair leaf gate actuator in service gate number 1 ($15,000).

RC: $1,608,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection OCA/Peer Review ($15,000).

H: N/A

EN: $317,000 – Funds will be used for commonly performed O&M work

WS: N/A

OTHER INFORMATION: Over 4,000 educational contacts are made each year.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $911,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Conemaugh River Lake, PA

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738), as amended by the Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Conemaugh Dam and reservoir is located on the Conemaugh River in Indiana and Westmoreland Counties, PA. The dam is located 7.5 miles upstream from Saltsburg, where the Conemaugh River and Loyalhanna Creek join to form the Kiskiminetas River. Conemaugh River Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $1,582,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of this project.

FISCAL YEAR 2019 ALLOCATION: $1,730,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including safety repairs to the road and parking areas, security measures at the project and pest and invasive species management.

BUDGETED AMOUNT FOR FY 2020: M: $309,000 **O:** $1,542,000 **T:** $1,851,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,727,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the installation of a motor and gearing on the jib crane ($140,000) and inspection activities ($355,000).

RC: $82,000 – Funds will be used for routine O&M for recreation.

H: N/A

EN: $42,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including management of special status species ($25,000).

WS: N/A

OTHER INFORMATION: Conemaugh River Lake is estimated to have prevented more than $2,233,194,000 in damages since its completion in 1953.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $387,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cowanesque Lake, PA

AUTHORIZATION: Flood Control Act of 1958 (P.L. 85-500), 85th Congress and described in House Document 394, 84th Congress, 2nd Session

LOCATION AND DESCRIPTION: Cowanesque Lake is located in Tioga County of Pennsylvania, on the Cowanesque River, 2 miles upstream of the confluence of the Cowanesque River with the Tioga River at Lawrenceville.

FISCAL YEAR 2018 ALLOCATION: $3,039,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) of dam. Funds were also used for specific work activities including a repair to concrete structures in spillway walls and slab, a recreation report and a replacement of water components for sustainability.

FISCAL YEAR 2019 ALLOCATION: $2,864,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a periodic inspection, underwater inspection, HSS inspection and assessment, emergency exercise, and water conservation improvements for sustainability.

BUDGETED AMOUNT FOR FY 2020: M: $415,000 **O:** $1,702,000 **T:** $2,117,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,249,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a bridge inspection and an HSS inspection.

RC: $570,000 – Funds will be used for commonly performed O&M work.

EN: $216,000 – Funds will be used for commonly performed O&M work.

H: N/A

WS: $82,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Operation of the project provides benefit to a population at risk of 295,000. Flood damages prevented are estimated through FY 2018at $313 million. A conservation lake is maintained at elevation 1080 (National Geodetic Vertical Datum) having a surface area of 1090 acres. Seventy-nine percent of the conservation storage space is allocated for water supply storage owned by the Susquehanna River Basin Commission.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,351,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Crooked Creek Lake, PA

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738), as amended by the Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Crooked Creek Dam is located on Crooked Creek, in Armstrong County, PA. The dam is located 7.2 miles above the junction of the creek with the Allegheny River near Ford City. Crooked Creek Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $1,779,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $3,641,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including initiating replacement of the gate operating machinery, security measures at the project, update to the Master Plan, management of cultural resources and management of special status species.

BUDGETED AMOUNT FOR FY 2020: M: $1,894,000 **O:** $1,644,000 **T:** $3,538,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,015,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($36,000) and replace gate operating machinery ($1,498,000).

RC: $408,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $115,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including updating master plan ($90,000).

WS: N/A

OTHER INFORMATION: Crooked Creek Lake estimated to have prevented more than $550,300,000 in damages since its completion in 1940.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $42,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Curwensville Lake, PA

AUTHORIZATION: Flood Control Act of 1954 and described in House Document 29, 84th Congress, 1st Session

LOCATION AND DESCRIPTION: Curwensville Dam is located on the West Branch Susquehanna River, 0.6 miles upstream from Curwensville, Pennsylvania. The dam is an earthen-fill embankment 2,850 feet in length with a spillway and a gate-controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $891,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,049,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a National Register nomination evalution, initiate a master plan and NEPA review and the demo and disposal of the dam tender residence.

BUDGETED AMOUNT FOR FY 2020: M: $179,000 **O:** $760,000 **T:** $939,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $777,000 – Funds will be used for commonly performed O&M work.

RC: $25,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $55,000 – Funds will be used for commonly performed O&M work.

WS: $82,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Operation of the project provides benefit to a population at risk of 130,000. Flood damages prevented are estimated through FY 2018 at $303 million. Fifty-seven percent of the conservation storage space is allocated for water supply storage, owned by the Susquehanna River Basin Commission. Clearfield County operates and maintains the recreation area under a real estate agreement.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $205,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: East Branch Clarion River Lake, PA

AUTHORIZATION: Flood Control Acts of 1938 (P.L. 75-761) and 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: East Branch Dam is on the East Branch of the Clarion River, 7.5 miles upstream from its junction with its West Branch at Johnsonburg, PA. The reservoir is located entirely in Elk County, PA. East Branch Clarion River Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $1,405,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $5,833,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing the gate operating machinery for three gates.

BUDGETED AMOUNT FOR FY 2020: M: $988,000 **O:** $1,179,000 **T:** $2,167,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,990,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including rehabilitation of water well #1 ($661,000) and inspection activities ($16,000).

RC: $157,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $20,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: East Branch Clarion River Lake is estimated to have prevented more than $92,300,000 in damages since its completion in 1951.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $139,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Foster J. Sayers Dam, PA

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: Foster Joseph Sayers Dam is located on Bald Eagle Creek one mile upstream from Blanchard, New York and 14 miles above the confluence with the West Branch of the Susquehanna River at Lock Haven, Pennsylvania. The project consists of an earthen-fill dam with a spillway and gated outlet.

FISCAL YEAR 2018 ALLOCATION: $2,512,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M), ERDC modeling, installation of a toe drain system and slip line drainage pipes.

FISCAL YEAR 2019 ALLOCATION: $2,143,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including plans and specs for stilling basin/channel repairs, install new toe drain system and repair a large concrete spall and roof downspout at operating tower.

BUDGETED AMOUNT FOR FY 2020: M: $5,619,000 **O:** $1,034,000 **T:** $6,653,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $6,539,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including HSS inspections, monumentation replacement, stilling basin/channel repairs, tower repairs, and floatwell system repairs.

RC: $33,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $81,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The Foster Joseph Sayers Dam reservoir has a storage capacity of 99,000 acre-feet and is designed to reduce flood heights on Bald Eagle Creek below the dam and along the West Branch of the Susquehanna River below Lock Haven, Pennsylvania. Operation of the project provides benefit to a population at risk of 125,000. Flood damages prevented are estimated through FY 2018 at $234 million. The project maintains a pool of 1,730 acres during the recreation season. The Commonwealth of Pennsylvania, Department of Conservation and Natural Resources operates and maintains the recreation area, Bald Eagle State Park, under a real estate lease.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $990,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Francis E. Walter Dam & Reservoir, PA

AUTHORIZATION: Project authorized by House Document 79-587 of 1946, modified by House Document 87-522 of 1962

LOCATION AND DESCRIPTION: The project is on the Lehigh River, just below the confluence of Bear Creek with the Lehigh River, six miles above White Haven, Pennsylvania, and 77 miles above the junction of the Lehigh and Delaware Rivers at Easton, Pennsylvania. The project consists of an earthen- and rock-filled dam with a concrete spillway and a gate controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $2,003,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including repair entrance roads.

FISCAL YEAR 2019 ALLOCATION: $2,693,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including pest and invasive species management, boundary monumentation, and repair entrance roads.

BUDGETED AMOUNT FOR FY 2020: M: $770,000 **O:** $773,000 **T:** $1,543,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,513,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including rehabilitate and inspect right service gate ($475,000), and repair leaks in flood control bulkheads ($200,000).

RC: N/A

H: N/A

EN: $30,000 - Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The reservoir capacity is 108,000 acre-feet for flood management with a conservation pool of 2,000 acre-feet capacity. Recreation facilities also include a boat launch area, hiking trails and provision for fishing and hunting. Whitewater and fishing industries in the area utilize dam releases.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,407,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: General Edgar Jadwin Dam and Reservoir, PA

AUTHORIZATION: River and Harbor Act of 1948 (P L. 80-858).

LOCATION AND DESCRIPTION: The project is located in Wayne County, Pennsylvania, along the Dyberry Creek, a tributary of the Lackawaxen River, about three miles upstream of Honesdale, Pennsylvania, and 30 miles above the junction of the Lackawaxen and Delaware Rivers. The facility consists of an earthen- and rock-fill dam with a low-level un-gated outlet works and an emergency spillway.

FISCAL YEAR 2018 ALLOCATION: $391,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $335,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including pest and invasive species maintenance.

BUDGETED AMOUNT FOR FY 2020: M: $50,000 **O:** $285,000 **T:** $335,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $335,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project was completed and placed into service in 1960. Reservoir capacity is 24,500 acre-feet for flood control, with no conservation pool. There is no permanent pool and no provisions have been made for recreational use, however, low impact opportunities such as hunting, stream fishing, hiking and bird watching are enjoyed by visitors to the project lands.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $272,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Johnstown, PA

AUTHORIZATION: Flood Control Acts of 1936 (P.L. 74-738) and 1937

LOCATION AND DESCRIPTION: The project is located in Pennsylvania, 58 miles east of Pittsburgh in Cambria County along the Conemaugh River, Little Conemaugh River, and Stonycreek River. Major rehabilitation of the nine-mile-long local flood protection project was authorized in 1991.

FISCAL YEAR 2018 ALLOCATION: $46,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $1,565,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including sedimentation removal and maintenance on the Little Conemaugh River, inspection activities and risk management coordination.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $21,000 **T:** $21,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $21,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project is estimated to have prevented more than $830,000,000 in damages since its completion in 1939.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $22,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Kinzua Dam and Allegheny Reservoir, PA

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738), as amended by the Flood Control Act of 1938 (P.L. 75-761) and 1941

LOCATION AND DESCRIPTION: Kinzua Dam is located on the Allegheny River in Warren County, PA about 198 miles above the mouth of the river at Pittsburgh. Allegheny Reservoir is located in Warren and McKean Counties and Cattaraugus County, NY. Kinzua Dam and Allegheny Reservoir is a multi-purpose reservoir with nine boat ramps, numerous campgrounds, extensive trails, picnic areas, and a visitor information center.

FISCAL YEAR 2018 ALLOCATION: $1,752,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $1,565,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dam safety inspection activities, replacement of four-way hydraulic valves and modification of piping, and pest and invasive species management activities.

BUDGETED AMOUNT FOR FY 2020: M: $259,000 **O:** $1,323,000 **T:** $1,582,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,333,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($55,000).

RC: $184,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $65,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including water quality equipment and pest and invasive species management ($40,000).

WS: N/A

OTHER INFORMATION: Kinzua Dam and Allegheny Reservoir is estimated to have prevented more than $1,300,000,000 in damages since its completion in 1965. The project also houses a 400 megawatt hydropower plant operated by the First Energy Corporation. Flow regulation helps to maintain navigable depths for commercial traffic on the Allegheny and upper Ohio Rivers.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $225,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Loyalhanna Lake, PA

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738), as amended by Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Loyalhanna Dam is on Loyalhanna Creek, 4.75 miles above its junction with the Conemaugh River at Saltsburg, PA. The multi-purpose reservoir is located entirely in Westmoreland County.

FISCAL YEAR 2018 ALLOCATION: $4,603,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project plus resolution of real estate encroachments, shoreline management activities, boundary inspection and marking and repairs to the service bridge and deck.

FISCAL YEAR 2019 ALLOCATION: $1,606,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $6,743,000 **O:** $1,573,000 **T:** $8,316,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $8,108,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including motorizing the jib crane swing #2 gantry crane ($140,000); continuing repairs to the service bridge and deck (package 3 ($3,166,000) and (package 4 ($3,132,000); and inspection activities (18,000).

RC: $174,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $34,000 **-** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Loyalhanna is estimated to have prevented more than $533,000,000 in damages since its completion in 1943.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,844,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mahoning Creek Lake, PA

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738), as amended by the Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Mahoning Dam is located on Mahoning Creek in Armstrong County. The dam is located 22.9 miles upstream from the junction of the creek and the Allegheny River. The reservoir it creates is in Armstrong, Indiana and Jefferson Counties. Mahoning Creek Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $1,278,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $1,473,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including final engineering and design for replacement of the service bridge and pier rehabilitation.

BUDGETED AMOUNT FOR FY 2020: M: $283,000 **O:** $1,152,000 **T:** $1,435,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,289,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($27,000).

RC: $79,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $67,000 – Funds will be used for commonly performed O&M work. Funds will also be used for management of special species status ($25,000)

WS: N/A

OTHER INFORMATION: Mahoning Creek Lake is estimated to have prevented more than $689,000,000 in damages since its completion in 1941.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $88,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Monongahela River, PA and WV

AUTHORIZATION: Rivers and Harbors Act of 1902, 1905, 1909, 1922, 1930, and 1950; Water Resources Development Act of 1986 and 1992; and Supplemental Appropriations Act of 1985

LOCATION AND DESCRIPTION: The project consists of the navigable portion of the Monongahela River for the entire 128.7 miles of the river, from just above Fairmont, WV to The Point at Pittsburgh, PA. The Federal project includes nine navigation locks and dams; they are Braddock, Grays Landing, Hildebrand, Maxwell, Morgantown, Opekiska, Point Marion, and Locks and Dams Numbers 3 and 4.

FISCAL YEAR 2018 ALLOCATION: $16,641,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of nine navigation locks and dams that provide approximately 128 miles of navigable river. Funds were also used to perform dredging to maintain the navigation channel, perform repairs to ladder rungs and concrete in monolith joints at Charleroi Locks and Dam, and prepare plans and specifications to replace interlocks and four-way hydraulic valves at Braddock Locks and Dam.

FISCAL YEAR 2019 ALLOCATION: $15,981,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing the valve interlock and four-way hydraulic valves at Braddock Locks and Dam; dredging to maintain the navigation channel and dam safety inspection activities.

BUDGETED AMOUNT FOR FY 2020: M: $4,665,000 **O:** $12,201,000 **T:** $16,866,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $16,866,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacement of the Point Marion holding tank ($100,000) and inspection activities ($787,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The locks between Braddock and Point Marion are operated continuously. Morgantown Lock is open one shift, 7 days a week. Hildebrand and Opekiska Locks will only be available for commercial navigation lockages by appointment.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $947,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ohio River Locks and Dams, PA, OH, and WV

AUTHORIZATION: Rivers and Harbors Act of 1909 and 1918

LOCATION AND DESCRIPTION: The Federal project consists of the navigable portion of the Ohio River from The Point at Pittsburgh, 127.2 miles downstream, to New Martinsville, WV. Commercial and recreational navigation is provided for by six locks and dams: Emsworth, Dashields, Montgomery, New Cumberland, Pike Island, and Hannibal.

FISCAL YEAR 2018 ALLOCATION: $45,029,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine and non-routine operation and maintenance (O&M) activities at locks and dam to include monolith crack stabilization, installing bulkhead slots to replace boule and poiree dams, and fabricating two dam lift gates at Montgomery Locks and Dam; dewatering the main lock chamber at Dashields Locks and Dam; fabricating floating mooring bitts and replacing hydraulic cylinders at New Cumberland Locks and Dam; repairing the downstream land wall miter gate anchorage at Dashields Locks and Dam; repairing crane rail clips at Pike Island Locks and Dam; initiate design work to 60% for Emsworth Crack Stabilization of land wall; development and implementation of a monolith monitoring system; develop plans and specifications for closure components for 56' auxiliary chamber; design to 95% plans and specifications to fabricate 110 foot lock bulkheads; and water signage at Dashields Locks and Dams.

FISCAL YEAR 2019 ALLOCATION: $51,655,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities; installing lower bulkhead slots in the primary lock chamber, installing lift gates, stabilizing the monolith crack and replacing the dam gate programmable logic controllers at Montgomery Locks and Dam, repairing lock gate machinery at Pike Island Locks and Dam, extending the handrails at Hannibal Locks and Dam, replacing the auxiliary upstream miter gates at New Cumberland Locks and Dam, final design for the crack stabilization of land wall at Emsworth Locks and Dam and design of a 4-corner hydraulic system in the main chamber at Pike Island.

BUDGETED AMOUNT FOR FY 2020: M: $18,042,000 **O:** $14,729,000 **T:** $32,771,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $32,771,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dam signage at Dashields L/D ($2,500,000); building a needle dam in the auxiliary chamber at Montgomery L/D ($3,440,000); repairing miter gate anchorages and dewatering at Emsworth L/D ($4,040,000); repairing Pike Island River Wall Monolith 33/34 Crack ($665,000); and repairing tainter gates at Pike Island ($1,941,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Emsworth is rated Dam Safety Action Class (DSAC) I with very high probability of failure, and Montgomery Dam is rated DSAC II with a high probability of failure. The six locks and dam structures on the Ohio River have an average age of 62 years (82 years for the upper three locks and 43 years for the lower three locks). This project funds the O&M of the three oldest structures on the mainstem of the Ohio River. Emsworth, Dashields and Montgomery are currently being studied for major capital improvements with funding in the General Investigations account.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $3,915,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ohio River Open Channel Work, PA, OH, & WV

AUTHORIZATION: Rivers and Harbors Act dated 1909 and 1918

LOCATION AND DESCRIPTION: The project is located along the Ohio River from the confluence of the Monongahela and Allegheny Rivers in Pittsburgh to river mile 127.2 at New Martinsville, WV. The Ohio River Open Channel has an authorized depth of nine feet. The project encompasses six locks and dams: Emsworth, Dashields, Montgomery, New Cumberland, Pike Island, and Hannibal.

FISCAL YEAR 2018 ALLOCATION: $902,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and dredging to maintain the navigation channel.

FISCAL YEAR 2019 ALLOCATION: $1,747,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including dredging to maintain the navigation channel.

BUDGETED AMOUNT FOR FY 2020: M: $760,000 **O:** $199,000 **T:** $959,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $959,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dredging to maintain the navigation channel ($760,000) and environmental studies and monitoring ($40,000)

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The annual average tonnage of commodities transported on this waterway over the last five years is 214 million tons.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $20,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Prompton Lake, PA

AUTHORIZATION: This project was authorized by House Document 80-113 (1948), as modified by House Document 87-522 (1962)

LOCATION AND DESCRIPTION: The project is on Lackawaxen River within the Borough limits of Prompton, four miles upstream from Honesdale, Pennsylvania, and 30 miles above the confluence of the Lackawaxen and Delaware Rivers. The project consists of an earth- and rock-filled dam, 140-feet high and 1,226-feet long on the crest. The reservoir has a capacity of 20,300 acre-feet for flood control, 28,000 acre feet of excess storage with a conservation pool of 3,400 acre-feet capacity.

FISCAL YEAR 2018 ALLOCATION: $975,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $842,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing moderate leak on intake structure.

BUDGETED AMOUNT FOR FY 2020: M: $40,000 **O:** $515,000 **T:** $555,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $530,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: $25,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $539,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Punxsutawney, PA

AUTHORIZATION: The Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Punxsutawney, PA is located in Jefferson County on Mahoning Creek, 52 miles above its mouth and 30 miles above Mahoning Creek Lake Dam. Punxsutawney, PA is a local flood protection project. The project provides flood protection by channel enlargement, dikes, and walls. The improvements are designed to accommodate discharges 20 percent greater than that of the maximum flood of record.

FISCAL YEAR 2018 ALLOCATION: $15,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $712,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing the concrete channel.

BUDGETED AMOUNT FOR FY 2020: M: $829,000 **O:** $33,000 **T:** $862,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $862,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including erosion repairs and sediment removal ($829,000).

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Punxsutawney is estimated to have prevented $103 million in flood damages since its completion in 1940.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $15,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Raystown Lake, PA

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Raystown Lake is located on the Raystown Branch about 5.5 miles upstream from its confluence with the Juniata River in Huntingdon County of Pennsylvania. The dam is an earth- and rock-fill structure with a two-bay gated spillway with two tainter gates.

FISCAL YEAR 2018 ALLOCATION: $21,810,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M), design/plans/specs and continued repairs on the tainter gates, dam safety remediation tasks, a master plan update and a recreation report.

FISCAL YEAR 2019 ALLOCATION: $6,228,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including bridge inspections, design/plans/specs for outlet tunnel channel and removing blockages in the foundation drains. Funds are also provided for a new water treatment plant.

BUDGETED AMOUNT FOR FY 2020: M: $883,000 **O:** $3,701,000 **T:** $4,584,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: NA

FRM: $1,584,000 – Funds will be used for commonly performed O&M work.

RC: $2,088,000 – Funds will be used for commonly performed O&M work.

H: NA

EN: $912,000 – Funds will be used for commonly performed O&M work.

WS: NA

OTHER INFORMATION: The project encompasses 29,700 total acres and flood control storage available is 248,000 acre-feet. Operation of the project provides benefit to a population at risk of 95,000. Flood damages prevented through FY 2018 are $297 million. The Corps of Engineers operates and maintains 12 public access areas. Additionally, there are four recreation real estate concession leases.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $16,087,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Shenango River Lake, PA

AUTHORIZATION: Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Shenango Dam is located on the Shenango River about 0.8 mile north of Sharpsville and 34.2 miles above its junction with the Mahoning River near New Castle, PA where the it forms the Beaver River. The reservoir is located in Mercer County, PA. The project extents into Trumbull County, OH northeast of Youngstown. Shenango River Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $2,464,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operations and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,050,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including constructing safe access to the stilling basin, repairing erosion at the right bank gutter, security measures and management of special status species.

BUDGETED AMOUNT FOR FY 2020: M: $484,000 **O:** $2,360,000 **T:** $2,844,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,825,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including rehabilitation of bulkhead hoist ($25,000), replacing electric service to the dam ($185,000), and inspection activities ($25,000).

RC: $972,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $47,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Shenango River Lake is estimated to have prevented $209 million in flood damages since its completion in 1965.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $58,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Stillwater Lake, PA

AUTHORIZATION: Flood Control Act of 1941

LOCATION AND DESCRIPTION: Stillwater Lake is located in Susquehanna County of Pennsylvania on the Lackawanna River four miles north and upstream from Forest City. The dam is an earthen-fill structure, 1,700 feet long and rises 75 feet above the streambed, with a spillway and gate controlled outlet.

FISCAL YEAR 2018 ALLOCATION: $835,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $863,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $195,000 **O:** $443,000 **T:** $638,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: NA

FRM: $612,000 - Funds will be used for commonly performed O&M work.

RC: $8,000 - Funds will be used for commonly performed O&M work.

H: NA

EN: $18,000 **-** Funds will be used for commonly performed O&M work.

WS: NA

OTHER INFORMATION: The project reduces flood heights on the Lackawanna River, downstream of the dam and on the Susquehanna River, downstream from its confluence with the Lackawanna River. Operation of the project provides benefit to a population at risk of 285 thousand. Flood damages prevented through FY 2018 are an estimated $211 million. Pennsylvania-American Water Company utilizes Stillwater as a source of water supply for the Forest City Water Purification Plant. The Pennsylvania Fish and Boat Commission operate and maintain a boat launch at the lake under a real estate agreement.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2017 to FY 2018 was $218,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tioga-Hammond Lakes, PA

AUTHORIZATION: Flood Control Act of 1958

LOCATION AND DESCRIPTION: The project is located just upstream of Tioga, Pennsylvania. The project consists primarily of two separate dams, one on Tioga River, and one on Crooked Creek. Both dams are located two miles upstream of the confluence of the two streams. The lakes are joined by a gated connecting channel in a saddle of the ridge separating the two streams. An uncontrolled spillway in Hammond Dam serves both reservoirs. A gated outlet conduit is provided in the left abutment of Tioga Dam for the control of flows for both reservoirs. An additional project feature is the Mansfield local flood protection project which consists of channel improvements, levees, and pumping stations to protect the borough of Mansfield during high water events.

FISCAL YEAR 2018 ALLOCATION: $2,945,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for the operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,445,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $647,000 **O:** $2,414,000 **T:** $3,061,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: NA

FRM: $1,886,000 - Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a bridge inspection, HSS inspections, and three pump station electrical upgrades for Mansfield Levee.

RC: $762,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $413,000 - Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Operation of the project provides benefit to a population at risk of 300 thousand. Flood damages prevented through FY 2018 are $578 million. The Corps operates and maintains the Ives Run and Lambs Creek recreation areas, as well as two overlooks.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $756,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tionesta Lake, PA

AUTHORIZATION: Flood Control Act of 1936 (P.L. 74-738), as amended by the Flood Control Act 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Tionesta Dam is located 78 miles northeast of Pittsburgh in Forest County. It lies on Tionesta Creek, 1.17 miles above the junction of the creek with the Allegheny River at Tionesta, PA. Tionesta Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $2,399,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) and resolution of real estate encroachments.

FISCAL YEAR 2019 ALLOCATION: $2,672,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities, installing a larger equalization door on the bulkhead to allow pressure to equalize and engineering and design to replace gate operating machinery.

BUDGETED AMOUNT FOR FY 2020: M: $3,379,000 **O:** $2,131,000 **T:** $5,510,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $4,839,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including installation of a flat wire rope ($45,000) and initiation of the replacement of the gate operating machinery (package 2 of 5 ($1,498,000) and (package 5 of 5 ($1,436,000).

RC: $620,000 - Funds will be used for commonly performed O&M work.

H: N/A

EN: $51,000 - Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Tionesta Lake is estimated to have prevented more than $576 million in flood damages since its construction in 1940.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $217,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Union City Lake, PA

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-4)

LOCATION AND DESCRIPTION: Union City Dam is located seven miles south of Union City in Erie County. It lies on French Creek 73.9 miles upstream from its junction with the Allegheny River near Franklin, PA. Union City Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $466,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $621,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including security upgrades.

BUDGETED AMOUNT FOR FY 2020: M: $97,000 **O:** $441,000 **T:** $538,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $493,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($13,000).

RC: $40,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $5,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Union City Lake is estimated to have prevented more than $97 million in damages since its construction in 1971.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $102,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Woodcock Creek Lake, PA

AUTHORIZATION: Flood Control Act of 1962 (P.L. 87-4)

LOCATION AND DESCRIPTION: Woodcock Dam is located three miles southeast of Saegertown in Crawford County on Woodcock Creek. The dam is 3.6 miles upstream from the creek's confluence with French Creek at a point 37.1 miles upstream from its confluence with the Allegheny River at Franklin, PA. Woodcock Creek Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $1,005,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,236,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing rubber seals on the bulkheads and emergency wheel gate, security upgrades, installing lighting as a cost savings measure and pest and invasive species management.

BUDGETED AMOUNT FOR FY 2020: M: $165,000 **O:** $945,000 **T:** $1,110,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $921,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($32,000).

RC: $174,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $15,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Woodcock Creek Lake is estimated to have prevented $35 million in flood damages since its construction in 1974.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $64,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: York Indian Rock Dam, PA

AUTHORIZATION: Flood Control Act of 1936, amended by Flood Control Act of 1938

LOCATION AND DESCRIPTION: Project comprises the protective works for York, Pennsylvania, and consists of Indian Rock Dam, which is three miles upstream from York, and channel improvements on Codorus Creek in the City of York. Indian Rock Dam is an earthen and rock structure with a side-channel spillway and gated outlet. Codorus Creek project consists of channel improvements including channel widening and deepening, flood walls, levees, protection of bank slopes, and removal of a mill dam to increase channel capacity.

FISCAL YEAR 2018 ALLOCATION: $16,782,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for the operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,382,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $237,000 **O:** $689,000 **T:** $926,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $897,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a bridge inspection.

RC: $12,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $17,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The typically dry reservoir area has a storage capacity of 28 thousand acre-feet and controls a drainage area of 94 square miles. Project protects the community of York, Pennsylvania, against flood discharges about 33-percent greater than the record flood of August 1933. Tropical storm Agnes (June 1972) filled the flood control reservoir and produced spillway flow. Operation of the project protects a population at risk of 20 thousand. Flood damages prevented through FY 2018 are an estimated $55 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $14,494,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Youghiogheny River Lake, PA and MD

AUTHORIZATION: Flood Control Act of 1938 (P.L 75-761)

LOCATION AND DESCRIPTION: The dam is located 1.2 miles above Confluence, Pennsylvania on the Youghiogheny River about 74.2 miles above its junction with the Monongahela River at McKeesport, Pennsylvania. The reservoir is located in Fayette and Somerset Counties in Pennsylvania and Garrett County in Maryland. Youghiogheny River Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $2,706,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,810,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities, cultural resources site monitoring and protection, management of special status species and shoreline management.

BUDGETED AMOUNT FOR FY 2020: M: $520,000 **O:** $2,718,000 **T:** $3,238,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,446,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($251,000).

RC: $492,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $292,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including comprehensive master plan update ($200,000).

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Youghiogheny River Lake is estimated to have prevented $597 million in flood damages since its construction in 1943. Water supply agreements result in annual reimbursement to the Treasury of $160 thousand.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $309,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

RHODE ISLAND

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fox Point Hurricane Barrier, RI

AUTHORIZATION: The Flood Control Act of 1958 (P.L. 85-500) as modified by Section 2866 of the National Defense Authorization Act of 2007 (P.L. 109-364)

LOCATION AND DESCRIPTION: Fox Point Hurricane Barrier is across the Providence River in Providence, Rhode Island, one mile from the downtown area. The barrier is a concrete structure, with a pumping station and three tainter gates. When closed, the gates prevent entry of tidal floodwaters into the City.

FISCAL YEAR 2018 ALLOCATION: $2,738,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was funded to replace the wall louvers, and conduct arc flash assessments. This work was completed in FY18.

FISCAL YEAR 2019 ALLOCATION: $2,312,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including arc flash assessment, inspect pumps, mitigate effects of concrete expansion, and replace heating system.

BUDGETED AMOUNT FOR FY 2020: **M:** $2,517,000 **O:** $273,000 **T:** $2,790,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,790,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replace barrier 11kv/4160 electrical transformers ($2,325,000).

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: This project has prevented an estimated $6.3 million in flood damages since placed in service in 1966.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,069,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Woonsocket Local Protection Project, RI

AUTHORIZATION: Authorized by the Flood Control Act of 1944

LOCATION AND DESCRIPTION: The Woonsocket Local Protection Project is located along the Blackstone River in Rhode Island, extending about 8,300 feet downstream from the Massachusetts and Rhode Island border to Woonsocket Falls Dam in the center of Woonsocket, Rhode Island. The project consists of widening, deepening, and straightening of the river channel 8,300 feet upstream of Woonsocket Falls Dam, and includes construction of a pumping station, 1,115 feet of earthen dike and 316 feet of concrete floodwall. The project included replacement of the Woonsocket Falls Dam with a concrete overflow structure 266-feet wide and equipped with four tainter gates.

FISCAL YEAR 2018 ALLOCATION: $438,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,410,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of roofs, tainter gate lubrication, replacement of generator, and repairs to the project toe drains.

BUDGETED AMOUNT FOR FY 2020: **M:** $185,000 **O:** $513,000 **T:** $698,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $698,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replacement of singleton pump station sluice gate operator ($90,000), structural analysis of gate ($20,000), and array testing of trunnion pins ($30,000).
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RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $166.4 million in flood damages since being placed in service in 1960. The project was turned over to the City of Woonsocket to operate and maintain in accordance with the Assurance Agreement in 1963. The National Defense Authorization Act of 2008 transferred responsibility of the operation and maintenance of the project to the Corps of Engineers.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $59,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

SOUTH CAROLINA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Atlantic Intracoastal Waterway (AIWW), SC

AUTHORIZATION: River and Harbor Act of 1945 (P.L. 79-14)

LOCATION AND DESCRIPTION: The AIWW is a naturally protected low use, inland navigation project that generally parallels the Atlantic coast between Norfolk, Virginia and the St. John's River in Florida. South Carolina's portion runs a distance of 210 miles and has an authorized depth of 12 feet. Approximately 90 small to medium-sized disposal areas along the AIWW totaling 2,399 acres are maintained. The AIWW is divided into three reaches in South Carolina and the current controlling depth of the project is -0.5 feet below mean lower low water (MLLW).

FISCAL YEAR 2018 ALLOCATION: $198,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine maintenance.

FISCAL YEAR 2019 ALLOCATION: $6,913,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work. Funds are also being used for specific work activities including maintenance dredging and placement area maintenance.

BUDGETED AMOUNT FOR FY 2020: M: $45,000 **O:** $240,000 **T:** $285,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $285,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including channel maintenance surveys ($45,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Utilizing the AIWW, approximately 14,000 barrels of jet fuel are delivered on a weekly basis from Jacksonville, Florida to the Marine Corps Air Station in Beaufort, South Carolina.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $621,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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SOUTH DAKOTA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Big Bend Dam & Lake Sharpe, SD

AUTHORIZATION: The Flood Control Act of 1944 (PL 78-534) and the Endangered Species Act of 1973 (PL 93-205)

LOCATION AND DESCRIPTION: The Big Bend Project is located northwest of Chamberlain, South Dakota, on South Dakota Highway 47, near Ft. Thompson, South Dakota. Construction on the dam began in 1959 and closure of the embankment occurred in 1963. The dam measures 10,570 feet in length and has a maximum height of 95 feet. Lake Sharpe extends 80 miles upstream, creates 200 miles of shoreline, and has a maximum depth of 78 feet at the dam.

FISCAL YEAR 2018 ALLOCATION: $10,375,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for non-routine items including: stabilization of Antelope Creek cultural site and an update to the project master plan.

FISCAL YEAR 2019 ALLOCATION: $9,801,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including replacement of powerhouse high bay lighting, replacing light fixtures along the crest road, and install new perimeter light emitting diode (LED) security fence lighting and associated new wiring and poles.

BUDGETED AMOUNT FOR FY 2020: M: $1,674,000 **O:** $8,014,000 **T:** $9,688,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $743,000 – Funds will be used for commonly performed O&M work.

H: $4,826,000 – Funds will be used for commonly performed O&M work.

EN: $785,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including wildlife and habitat management ($30,000)

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $3,323,000 shared between business lines as follows: HYD – 100%. Funds will be used for commonly performed O&M work. Cumulative flood damages prevented, from project start through FY 2017, $770 million. Plant installed generation capacity of 497 Megawatts, produced $25.8 million in power production in FY 2017.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $663,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cold Brook Lake, SD

AUTHORIZATION: River and Harbor Act of 1941 (PL 77-228) and Flood Control Act of 1944 (Pick-Sloan Act, PL 78-534)

LOCATION AND DESCRIPTION: Cold Brook Dam is located one mile north of Hot Springs, South Dakota. The dam is 925 feet in length and has a height of 127 feet. Cold Brook Lake is 1.2 miles in length and its multipurpose pool contains 520 acre-feet of water. Cold Brook Dam was constructed to reduce flood damage in the Fall River basin. In years past, the Fall River was subject to flash flooding, causing damage to Hot Springs, South Dakota and nearby rural areas. The Flood Control Act of 1941 authorized the construction of these two dams and the channel improvements within the community of Hot Springs.

FISCAL YEAR 2018 ALLOCATION: $379,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including replacement of a vault toilet in the campground.

FISCAL YEAR 2019 ALLOCATION: $342,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including dam safety surveys.

BUDGETED AMOUNT FOR FY 2020: M: $8,000 **O:** $405,000 **T:** $413,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $326,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to conduct periodic inspection ($70,000).

RC: $76,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $11,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 total $2.7 million. The project encompasses 484 land acres, 36 water acres with 2 miles of shoreline, and has a total reservoir storage capacity of 7.2 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $3,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cottonwood Springs Lake, SD

AUTHORIZATION: Flood Control Acts of 1941 and 1944 (P.L. 77-228, 78-534)

LOCATION AND DESCRIPTION: Cottonwood Springs Dam is located 4.5 miles west of Hot Springs, South Dakota. The dam and channel improvements were constructed under the authorization of Flood Control Act of 1941 to reduce flood damage in the Fall River basin. In years past, the Fall River was subject to flash flooding, causing damage to Hot Springs, South Dakota and nearby rural areas. The dam is 1,190 feet in length and stands 123 feet high.

FISCAL YEAR 2018 ALLOCATION: $227,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $261,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including dam safety surveys.

BUDGETED AMOUNT FOR FY 2020: M: $3,000 **O:** $343,000 **T:** $346,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $277,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including dam safety surveys in support of periodic inspection no. 14 ($50,000) and conduct periodic inspection no. 14 ($60,000).

RC: $52,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $17,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Cumulative flood damages prevented from project implementation through FY 2017 total $118 thousand. The project encompasses 608 land acres, 42 water acres with 2 miles of shoreline, and has a total reservoir storage capacity of 8.4 thousand acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $11,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fort Randall Dam, Lake Francis Case, SD

AUTHORIZATION: The Flood Control Act of 1944 (PL 78-534) and the Endangered Species Act of 1973 (PL 93-205)

LOCATION AND DESCRIPTION: Fort Randall Dam is located twelve miles west of Wagner, South Dakota. Construction on Fort Randall Dam began in 1946 and was completed in 1956. The dam measures 10,700 feet in length and has a maximum height of 140 feet. Lake Francis Case extends 107 miles upstream, creates 540 miles of shoreline, and has a maximum depth of 140 feet at the dam. The water in Lake Francis Case is stored for flood damage reduction, power generation, navigation support, fish and wildlife, recreation, irrigation, water supply, and water quality.

FISCAL YEAR 2018 ALLOCATION: $16,088,000

DESCRIPTION OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for non-routine work including replacement of the fire suppression system in power house; replacement of the fire alarm panels in the intake and spillway structures; repair of the catwalks in tunnel terminal areas; perform an energy audit; and bring project security systems up to current standards.

FISCAL YEAR 2019 ALLOCATION: $12,149,000

DESCRIPTION OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including North American Energy Reliability Corporation compliance monitoring and enforcement, a dam safety periodic inspection and assessment report, bank stabilization to protect a cultural site; an archaeological and paleontological review and inspection; replacing the stilling basin pumps and motors; and protection and security improvements.

BUDGETED AMOUNT FOR FY 2020: M: $2,269,000 **O:** $10,129,000 **T:** $12,398,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $147,000 – Funds will be used for commonly performed O&M work.

H: $6,374,000 – Funds will be used for commonly performed O&M work.

EN: $1,256,000 – Funds will be used for for commonly performed O&M work.

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $4,611,000 shared between business lines as follows: HYD – 44%, NAV – 24%, and FRM – 32%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including spillway gate fitness for service analysis and testing ($510,000). Cumulative flood damages prevented, from project start through FY 2017 are $12.9 billion. Plant installed generation capacity of 320 megawatts, produced $47.0 million in power production in FY 2017. The project encompasses 115,861 land acres, 77,237 water acres with 263 miles of shoreline, and has a total reservoir storage capacity of 5.3 million acre-feet.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $524,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lake Traverse, SD and MN

AUTHORIZATION: Flood Control Act of 1936

LOCATION AND DESCRIPTION: The project is located on the Minnesota/South Dakota border between Browns Valley, Minnesota and Wahpeton, North Dakota. Browns Valley on the southern end of the project is the location of the continental divide where flowages split between the Gulf of Mexico to the south and Hudson Bay to the north. The project consists of two dams and appurtenant structures and provides flood control benefits downstream on the Bois de Sioux River and the Red River of the North. The lake drains through the Bois de Sioux River to the Red River of the North, and the two waters form a portion of the boundary between Minnesota and South Dakota. The Lake Traverse and Bois de Sioux River project is a flood control and water conservation reservoir which includes: a main structure consisting of a 14,500 foot earth dam and a concrete control structure at the north end of Lake Traverse near White Rock, SD; a secondary control structure at Reservation Highway near Wheaton which permits control of the upper section of the reservoir at a slightly higher elevation; a 5,000 foot embankment at the south end of Lake Traverse to protect Browns Valley; and 24 miles of channel improvement below the main dam.

FISCAL YEAR 2018 ALLOCATION: $686,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $819,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are being used for specific work activities to replace the bulkhead at White Rock dam and repaint the tainter gate and machinery. Sustainability funds are being used for lighting upgrades, installing ground source heat pump, and upgrading building insulation.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $648,000 **T:** $648,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $524,000 – Funds will be used for commonly performed O&M work.

RC: $59,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $65,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Damages prevented since construction are estimated at $4.5 billion. There are day use public access sites providing fishing and related outdoor recreation activities and the project boasts over 800 acres of wildlife management areas open for public use.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $40,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Oahe Dam & Lake Oahe, SD

AUTHORIZATION: Flood Control Act of 1944 (PL 78-534), Endangered Species Act of 1973 (PL 93-205)

LOCATION AND DESCRIPTION: The Oahe project is located seven miles north of Pierre, South Dakota. Construction on Oahe Dam began in 1948 and the project began generating electricity in 1962. The dam measures 9,300 feet in length and has a maximum height of 245 feet. The project provides benefits of flood damage reduction, power generation, navigation, fish and wildlife, recreation, irrigation, water supply, and water quality.

FISCAL YEAR 2018 ALLOCATION: $13,845,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to replace outdoor station switch gear equipment, for protection of the Rorgo/Ryghs cultural site, to replace windows in the powerhouse administration offices, to remove asbestos containing materials from several areas of the project, and to complete a master plan supplement for the study and development of a recreation area near Kenel, ND.

FISCAL YEAR 2019 ALLOCATION: $12,736,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific activities including pest and invasive species management, testing and evaluation of cultural resource sites, and security and protection improvements.

BUDGETED AMOUNT FOR FY 2020: M: $1,940,000 **O:** $11,783,000 **T:** $13,723,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $496,000 - Funds will be used for commonly performed O&M work.

H: $6,291,000 – Funds will be used for commonly performed O&M work.

EN: $1,581,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $5,340,000 shared between business lines as follows: HYD – 44%, NAV – 24%, and FRM – 32%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including sewer force main protection at stilling basin bridge ($785,000). Cumulative flood damages prevented from project start through FY 2017 are $14.1 billion. Plant installed generation capacity of 786 megawatts, produced $71.5 million in power production in FY 2017. The project encompasses 409 thousand land acres, 365 thousand water acres with 2.2 thousand miles of shoreline, and has a total reservoir storage capacity of 23 million.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $244,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

TENNESSEE

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Center Hill Lake, TN

AUTHORIZATION: Section 1 of the River and Harbor Act of 1946 (P.L. 79-525)

LOCATION AND DESCRIPTION: Center Hill Lake is located on the Caney Fork River in the Counties of DeKalb and Smith, about 80 miles east of Nashville. The project consists of a combination earthen and concrete gravity-type dam, a hydropower plant, and a flood storage reservoir with recreation and stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $15,928,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project and replacement of the existing SCADA system; upgrading the powerhouse ventilation system; repairing the failed spillway gate trunnion and seals; and rehabilitation of the spillway gates mechanical and electrical equipment.

FISCAL YEAR 2019 ALLOCATION: $7,642,000

DESCRIPTIONS FOR WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary surveying and rectification, cleaning out the foundation drain holes and performance of a monumentation survey.

BUDGETED AMOUNT FOR FY 2020: M: $1,271,000 **O:** $6,306,000 **T:** $7,577,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $1,537,000 – Funds will be used for commonly performed O&M work.

H: $3,113,000 – Funds will be used for commonly performed O&M work.

EN: $422,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary surveying ($63,000).

WS: $42,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The average generation for the hydropower plant is 350,000 MWH of energy annually, which is enough to supply 31,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $2,463,000 shared between business lines as follows: HYD – 53% and FRM – 47%. Funds will be used for commonly performed O&M work. Funds will also be used for dam safety IRRM monitoring ($75,000) and a monumentation survey ($40,000).

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,614,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cheatham Lock and Dam, TN

AUTHORIZATION: Section 1 of the River and Harbor Act of 1946 (P.L. 79-525)

LOCATION AND DESCRIPTION: Cheatham Lake is a high-use waterway located at Cumberland River mile 148.6, 42 river miles downstream of Nashville, Tennessee. It is approximately 10 miles northwest of Ashland City, Tennessee. The project consists of a 110-foot by 800-foot lock, concrete gravity-type dam, hydropower plant, and recreation and stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $8,161,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project and replacement of the existing SCADA system.

FISCAL YEAR 2019 ALLOCATION: $8,300,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including cleaning out the foundation drain holes, a periodic inspection and hydropower forebay debris removal.

BUDGETED AMOUNT FOR FY 2020: M: $1,520,000 **O:** $6,752,000 **T:** $8,272,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $2,691,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: $885,000 – Funds will be used for commonly performed O&M work.

H: $3,253,000 – Funds will be used for commonly performed O&M work.

EN: $228,000 – Funds will be used for commonly performed O&M work.

WS: $22,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: No alternate navigation route is available. Electric utilities serving the Southeastern United States rely on coal shipped from mines in Wyoming and Kentucky thru Cheatham. Approximately 3.5M tons of coal are shipped through the locks to coal-fired steam plants, providing 4.7 million megawatt-hours (MWh) of energy to the electrical grid. Nashville industries also depend heavily on bulk commodity delivery for raw materials. Coal and aggregates are dominant commodities. Shippers realize average annual transportation cost savings of more than $82,000,000. The hydropower plant generates 153,000 MWh of energy annually or enough supply for 13,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,193,000 shared between business lines as follows: NAV – 100%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $21,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Cordell Hull Dam and Reservoir, TN

AUTHORIZATION: Section 1 of the River and Harbor Act of 1946 (P.L. 79-525)

LOCATION AND DESCRIPTION: Cordell Hull Dam and Reservoir is a low-use waterway with the dam located on the Cumberland River at river mile 313.5, about 12 miles north of Carthage, Tennessee. The project consists of an 84-foot by 400-foot lock, concrete gravity- and earthen-fill dam, a hydropower plant, and recreation and stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $7,625,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project and repair of waterlines at Salt Lick Campground.

FISCAL YEAR 2019 ALLOCATION: $8,485,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary surveying and rectification; renovation of washhouses and confort stations; hydropower forebay debris removal and updating a master plan.

BUDGETED AMOUNT FOR FY 2020: M: $1,119,000 **O:** $6,940,000 **T:** $8,059,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $570,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: $1,789,000 – Funds will be used for commonly performed O&M work.

H: $3,449,000 – Funds will be used for commonly performed O&M work.

EN: $268,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The hydropower plant generates 363,000 megawatt-hours annually, enough for 30,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,968,000 shared between business lines as follows: HYD – 31%, NAV – 9%, and REC – 60%. Funds will be used for commonly performed O&M work. Funds will also be used for a monumentation survey ($40,000) and periodic inspection ($70,000).

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $40,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Dale Hollow Lake, TN

AUTHORIZATION: Section 1 of the River and Harbor Act of 1946 (P.L. 79-525)

LOCATION AND DESCRIPTION: Dale Hollow Dam and Lake is located on the Obey River, approximately 5 miles east of Celina, Tennessee. The project covers portions of the Counties of Clay, Pickett and Overton in Tennessee, and the Counties of Cumberland and Clinton in Kentucky. The project consists of a concrete gravity dam, a hydropower plant, and a flood storage reservoir with recreation and stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $8,980,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project, replacement of the existing SCADA system, and rehabilitation of the powerhouse elevator.

FISCAL YEAR 2019 ALLOCATION: $8,223,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary monumentation and rectification, updating a Master Plan, and replacing dam & intake works power service cable trays.

BUDGETED AMOUNT FOR FY 2020: M: $1,192,000 **O:** $6,464,000 **T:** $7,656,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $1,704,000 – Funds will be used for commonly performed O&M work.

H: $3,580,000 – Funds will be used for commonly performed O&M work.

EN: $531,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary surveying and monumentation ($155,000).

WS: $35,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The hydropower plant generates 126,000 megawatt-hours annually, enough for 10,500 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,806,000 shared between business lines as follows: HYD – 57% and FRM – 43%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $81,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: J. Percy Priest Dam & Reservoir, TN

AUTHORIZATION: Section 1 of the River and Harbor Act of 1946 (P.L. 79-525)

LOCATION AND DESCRIPTION: J Percy Priest Dam and Reservoir, TN is located on the Stones River, 6.8 miles above its confluence with the Cumberland River (mile 205.9) in Davidson County, TN. The project consists of a combination earthen and concrete gravity dam, a hydropower plant, and a flood storage reservoir with recreation and environmental stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $5,640,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M); preparation of water storage agreements per the terms of a settlement agreement with the Town of Smyrna and replacement of the existing Supervisory Control and Data Acquisition (SCADA) system.

FISCAL YEAR 2019 ALLOCATION: $5,617,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including cleaning out the foundation drains.

BUDGETED AMOUNT FOR FY 2020: M: $1,213,000 **O:** $4,624,000 **T:** $5,837,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $2,125,000 – Funds will be used for commonly performed O&M work.

H: $1,303,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including arc flash hazard mitigation such as replacing breakers and motor control centers ($400,000)

EN: $304,000 – Funds will be used for commonly performed O&M work.

WS: $75,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The hydropower plant generates 75,000 megawatt-hours of energy annually, enough to supply 6,000 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $2,030,000 shared between business lines as follows: FRM – 42%, HYD – 7%, and REC – 51%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $68,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION NAME: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Old Hickory Lock and Dam, TN

AUTHORIZATION: Section 1 of the River and Harbor Act of 1946 (P.L. 79-525)

LOCATION AND DESCRIPTION: Old Hickory Lock and Dam is located in Metropolitan Nashville in Davidson County, TN. The project consists of an 84-foot by 400-foot lock, concrete gravity and earthen-fill dam, a hydropower plant, and recreation and stewardship areas.

FISCAL YEAR 2018 ALLOCATION: $10,223,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $11,636,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary monumentation and rectification, engineering and design for upgrades to the waste water treatment plant at the Left Bank Recreation Area, monumentation survey, hydropower forebay debris removal, and plans & specifications for switchyard control rehabilitation.

BUDGETED AMOUNT FOR FY 2020: M: $3,631,000 **O:** $9,679,000 **T:** $13,310,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $4,847,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including installation of bulkhead slots for new maintenance bulkheads ($2,076,000).

FRM: N/A

RC: $1,880,000 – Funds will be used for commonly performed O&M work.

H: $3,422,000 – Funds will be used for commonly performed O&M work.

EN: $786,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary monumentation and rectification ($60,000)

WS: $30,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Coal and industrial chemicals are the dominant commodities. Navigation through Old Hickory Lock represents the only coal fuel source for one of the Tennessee Valley Authority's major electric generating stations, Gallatin Steam Plant. The hydropower plant generates 482,000 megawatt-hours of energy annually, enough for 40,200 homes. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $2,345,000 shared between business lines as follows: HYD – 63% and NAV – 37%. Funds will be used for commonly performed O&M work.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $61,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tennessee River, TN

AUTHORIZATION: Tennessee Valley Authority Act of 1933. (P.L. 73-17)

LOCATION AND DESCRIPTION: The Tennessee River is formed by the junction of the French Broad and Holston Rivers in eastern Tennessee. The river flows through northern Alabama to the northeast boundary of Mississippi, and then across Tennessee and Kentucky before merging into the Ohio River at Paducah, Kentucky. The Tennessee River navigation system has 10 locks and 780 miles of navigable channel. There are 150 terminals (13 municipal, 15 governments and 122 private), 79 of which have railroad connections. Principal commodities are petroleum products, stone, sand, gravel, coal, coke, grain, chemicals, iron and steel.

FISCAL YEAR 2018 ALLOCATION: $22,352,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) and repair of the upstream miter gate embedded anchorage.

FISCAL YEAR 2019 ALLOCATION: $27,342,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing machinery and the lock wall at Kentucky Lock; installing new culvert valves at Pickwick Lock; Kentucky Lock stop log slots; and replacement of mooring cells at Tennessee River mile 303.5.

BUDGETED AMOUNT FOR FY 2020: M: $5,981,000 **O:** $17,811,000 **T:** $23,792,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $23,792,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including operational condition assessment inspections ($36,000) and installing stop log slots at Pickwick Lock ($2,164,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Locks on the Tennessee River are the most economical means of bulk material transport for 780 miles of navigation channel. The average age of locks is 60 years. There is considerable river use for military and rocket booster shipments and oversized components, such as nuclear steam generators. The Tennessee Valley Authority heavily uses barge transportation to service hydroelectric, coal, steam, and nuclear plants. The Power Service shop at Muscle Shoals performs maintenance on dam and lock components for multiple U.S. Army Corps of Engineers Districts.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $255,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Aquilla Lake, TX

AUTHORIZATION: Flood Control Act of 1968

LOCATION AND DESCRIPTION: Aquilla Lake is located in Hill County, 0.8 miles southwest of Hillsboro, Texas. The project consists of an earth fill dam and uncontrolled concrete spillway with a total storage capacity of 146,500 acre-feet for flood control, water supply, and sediment. There is one undeveloped recreation area of 957 acres and six access areas totaling 27 acres.

FISCAL YEAR 2018 ALLOCATION: $1,069,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,129,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including procurement of an outlet works standby generator.

BUDGETED FOR FY 2020: M: $222,000 **O:** $989,000 **T:** $1,211,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $963,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work including a bridge inspection ($10,000).

RC: $109,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $125,000 – Funds will be used for commonly performed O&M work.

WS: $14,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Aquilla Lake is estimated to have prevented $64 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $11,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Arkansas-Red River Basins Chloride Control – Area VIII, TX

AUTHORIZATION: Flood Control Act of 1966, as modified by the Flood Control Act of 1970, and as amended by the Water Resources Development Acts of 1974, 1976, and 1986

LOCATION AND DESCRIPTION: The project is located within the Wichita River basin in northern Texas. The project consists of a low flow collection dam on the South Fork of the Wichita River and the Truscott Brine Lake on the North Fork of the Wichita River.

FISCAL YEAR 2018 ALLOCATION: $1,776,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,781,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $25,000 **O:** $1,772,000 **T:** $1,797,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: N/A

H: N/A

EN: $1,797,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $37,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bardwell Lake, TX

AUTHORIZATION: P.L. 86-399 of 1960

LOCATION AND DESCRIPTION: Bardwell Lake is located in Ellis County near the City of Ennis, Texas. The project consists of an earth fill dam, an uncontrolled spillway, and a gated conduit through the dam with two sluice gates. Flood control storage capacity is 85,400 acre-feet. It also has seven recreation areas covering 1,238 acres.

FISCAL YEAR 2018 ALLOCATION: $3,204,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M). Funds were also used for specific work activities including maintenance for water lines and to replace security lights.

FISCAL YEAR 2019 ALLOCATION: $2,066,000

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2019: Funds are being used for commonly performed O&M work. Funds were also used for specific work activities including installation of separate utility meters.

BUDGETED AMOUNT FOR FY 2020: M: $453,000 **O:** $1,740,000 **T:** $2,193,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,425,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work including bridge inspection ($4,000) and security system ($65,000).

RC: $584,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $170,000 – Funds will be used for commonly performed O&M work.

WS: $14,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Bardwell Lake is estimated to have prevented $52 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $159,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Belton Lake, TX

AUTHORIZATION: Flood Control Act of 1946 as modified by the Flood Control Act of 1954

LOCATION AND DESCRIPTION: Belton Lake is located near the City of Belton on the Leon River in Bell and Coryell Counties of Texas. The project consists of an earth fill dam, an uncontrolled spillway, a gated outlet structure, and reservoir. The project provides flood control for 3,560 square miles of the Brazos River Basin with 644,200 acre-feet of flood control storage. Fourteen recreation areas cover 2,983 acres.

FISCAL YEAR 2018 ALLOCATION: $4,608,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including for a Master Plan compliance report and for repairs to cracked service gate.

FISCAL YEAR 2019 ALLOCATION: $4,704,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to evaluate the spillway channel, a periodic inspection, a hydraulic steel structures inspection, and the replacement of water lines.

BUDGETED AMOUNT FOR FY 2020: M: $2,563,000 **O:** $3,203,000 **T:** $5,766,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,497,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including flood gate replacement ($1,570,000) and repair overhead crane hoist ($345,000).

RC: $1,843,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $415,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Belton Lake is estimated to have prevented $870 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $298,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Benbrook Lake, TX

AUTHORIZATION: River and Harbor Act of 1945

LOCATION AND DESCRIPTION: Benbrook Lake is 10 miles southwest of Fort Worth in Tarrant County, Texas. It is located on the Clear Fork of the Trinity River, 15 river miles upstream from its confluence with the West Fork of the Trinity River. This project consists of a rolled earth fill dam (9,130 feet long by 130 feet high), and an uncontrolled spillway (500 feet wide). The flood control storage capacity is 170,350 acre-feet. Benbrook Lake has six recreation areas covering 3,033 acres.

FISCAL YEAR 2018 ALLOCATION: $3,334,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including upgrading the electrical system, modernizing park facilities, and updating the lake office's water source.

FISCAL YEAR 2019 ALLOCATION: $4,117,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairs to the main service gates and to initiate a Master Plan.

BUDGETED AMOUNT FOR FY 2020: M: $278,000 **O:** $2,942,000 **T:** $3,220,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,527,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing periodic inspections ($115,000) and installation of fall protection equipment ($50,000).

RC: $1,204,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $476,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including master plan compliance ($250,000) and boundary surveying ($50,000).

WS: $13,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Benbrook Lake is estimated to have prevented $11 billion in cumulative flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $543,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Buffalo Bayou and Tributaries, TX

AUTHORIZATION: House Document 456, 75th Congress, 2nd Session 1938 and modified by the Flood Control Act of 1954

LOCATION AND DESCRIPTION: The Buffalo Bayou and Tributaries project is located on Buffalo Bayou and Mayde Creek on the west side of the City of Houston, in Harris and Fort Bend Counties, Texas. Addicks Dam and Reservoir is an earthen dam 61,166 feet long and 48.5 feet above the Mayde Creek streambed with a storage capacity of 200,000 acre-feet. Barker Dam and Reservoir is an earthen dam 71,960 feet long and 36.5 feet above the Buffalo Bayou streambed with a storage capacity of 209,000 acre-feet. These reservoirs are designed to reduce flooding in the City of Houston.

FISCAL YEAR 2018 ALLOCATION: $2,790,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,310,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $140,000 **O:** $2,920,000 **T:** $3,060,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,060,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Both dams were screened by the National Dam Safety Cadre and were reclassified as Dam Safety Action Classification (DSAC)-1 (the highest risk category) due to their location on the west side of the City of Houston, TX and the high population at risk.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $325,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Canyon Lake, TX

AUTHORIZATION: River and Harbor Act of 1945 as modified by the Flood Control Act of 1954

LOCATION AND DESCRIPTION: Canyon Lake is located in Comal County, 12 miles northwest of New Braunfels, Texas, on the Guadalupe River. The project consists of a rolled earth fill dam, an uncontrolled spillway, and one conduit controlled by two slide gates. The flood control storage is 354,600 acre-feet. Eight recreation areas cover 1,544 acres.

FISCAL YEAR 2018 ALLOCATION: $3,415,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $5,019,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including boundary surveying and recertification.

BUDGETED AMOUNT FOR FY 2020: M: $411,000 **O:** $2,903,000 **T:** $3,314,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,427,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including to replace security lighting ($55,000).

RC: $1,484,000 – Funds will be used for commonly performed O&M work.
H: N/A

EN: $392,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary surveying and rectification ($102,000).

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Canyon Lake is estimated to have prevented $702 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $548,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

AUTHORIZATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Denison Dam, Lake Texoma, TX

AUTHORIZATION: Flood Control Act of 1938

LOCATION AND DESCRIPTION: Denison Dam, Lake Texoma is located on the Red River at river mile 725.9, about five miles northwest of the City of Denison in Grayson County, Texas. This is a multi-purpose project authorized for flood control, water supply, hydropower, regulation of Red River flows, navigation, and recreation. The project has two 35-megawatt hydropower generator units. At the top of the power pool the lake covers 74,686 acres.

FISCAL YEAR 2018 ALLOCATION: $8,495,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to purchase and install a new sequential event recorder at the powerhouse and to repair shoreline erosion on the Shawnee Creek portion of the lake.

FISCAL YEAR 2019 ALLOCATION: $7,900,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $1,446,000 **O:** $7,607,000 **T:** $9,053,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,107,000 – Funds will be used for commonly performed O&M work.

RC: $2,563,000 – Funds will be used for commonly performed O&M work.

H: $1,962,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection and certification activities for load handling equipment ($125,000).

EN: $1,860,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including revision of the project Shoreline Management Plan ($410,000).

WS: $50,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1944, Denison Dam, Lake Texoma is estimated to have prevented over $1.6 billion in cumulative flood damages. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,421,000 shared between business lines as follows: FRM – 51% and HYD – 49%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including preparation of the Red River basin water control manual ($100,000).

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,066,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Estelline Springs Experimental Project, TX

AUTHORIZATION: Flood Control Act of 1966

LOCATION AND DESCRIPTION: The Estelline Springs Experimental Project is one-half mile east of the town of Estelline in Hall County, Texas, located on the Prairie Dog Town Fork of the Red River. This is a single purpose project authorized for water quality control. The project consists of an earth ring dike nine feet high and 340 feet in diameter surrounding Estelline Springs.

FISCAL YEAR 2018 ALLOCATION: $35,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $39,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $10,000 **O:** $29,000 **T:** $39,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: N/A

H: N/A

EN: $39,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Construction of the Estelline Springs Experimental Project was completed in 1964.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ferrells Bridge Dam – Lake O' The Pines, TX

AUTHORIZATION: Flood Control Act of 1946

LOCATION AND DESCRIPTION: The project is located eight miles west of Jefferson located on the Cypress Creek in the Counties of Marion, Harrison, Upshur, Morris, Camp, and Titus in Texas. This is a multipurpose project for flood control, water supply, recreation and fish and wildlife. This project consists of an earth fill embankment and two conduits. Flood control storage is 587,200 acre-feet and water supply storage is 279,900 acre-feet. Thirty-four recreation areas comprise 758 acres.

FISCAL YEAR 2018 ALLOCATION: $4,001,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including Master Plan compliance and boundary inspection and maintenance.

FISCAL YEAR 2019 ALLOCATION: $4,620,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repair main service gates; shoreline management plan revision; airlift and clean piezometers; analyze and report on the uncontrolled spillway slab for proper operation; replace handrail fence on stilling basin wing walls; install personnel retrieval device for confined space rescue, and conduct an inspection of the hydraulic steel structures.

BUDGETED AMOUNT FOR FY 2020: M: $926,000 **O:** $2,717,000 **T:** $3,643,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,764,000 – Funds will be used for commonly performed O&M work. Funds will also be use for specific work activities including to replace wire ropes on flood gates and overhead crane ($225,000).

RC: $1,373,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $495,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including boundary surveying and rectification ($75,000).

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Ferrells Bridge Dam - Lake O' The Pines is estimated to have prevented $105 million in cumulative flood damages.

1/Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $159,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Granger Lake, TX

AUTHORIZATION: Flood Control Acts of 1954 and 1962

LOCATION AND DESCRIPTION: Granger Lake is located on the San Gabriel River in Williamson County, about 10 miles northeast of the City of Taylor, Texas. The project consists of a rolled earth fill dam and controlled outlet works with two hydraulically-operated gates. The conservation pool impoundment is 4,400 acres, government fee land consists of 13,602 acres, and flood control storage capacity is 178.600 acre-feet. Six recreation areas comprise 1,387 acres.

FISCAL YEAR 2018 ALLOCATION: $2,288,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $6,747,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including repair of the south sluice gates, a design/build contract for the lake project office, installation of utility meters, and replacement of a water line.

BUDGETED AMOUNT FOR FY 2020: M: $1,148,000 **O:** $1,890,000 **T:** $3,038,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,089,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work, including bridge inspection ($18,000), replacement of low-flow actuator ($835,000), replacement of gate hydraulic fluid ($55,000), and replacement of overhead crane cable ($30,000).

RC: $802,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $132,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Granger Lake is estimated to have prevented $93 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $100,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Grapevine Lake, TX

AUTHORIZATION: River and Harbor Act of 1945

LOCATION AND DESCRIPTION: Grapevine Lake is near the City of Grapevine located in Denton and Tarrant Counties, 20 miles northwest of Dallas. It is at river mile 11.7 on Denton Creek in the Trinity River Basin. The project consists of a rolled earth fill dam, a 500 foot long uncontrolled concrete ogee weir spillway, and a conduit controlled by two broom-type gates. The flood storage capacity is 243,050 acre-feet and water supply storage is 158,900 acre-feet. Twelve recreation areas cover 3,660 acres.

FISCAL YEAR 2018 ALLOCATION: $3,918,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including to repair the emergency slide gates.

FISCAL YEAR 2019 ALLOCATION: $5,303,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to repair of the outlet works service bridge, repair of the concrete outlet works tower, and replace the emergency slide gates.

BUDGETED AMOUNT FOR FY 2020: M: $360,000 **O:** $2,699,000 **T:** $3,059,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,432,000 – Funds will be used for commonly performed O&M work

RC: $937,000 – Funds will be used for commonly performed O&M work.
H: N/A

EN: $680,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a Master Plan ($400,000).

WS: $10,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Grapevine Lake is estimated to have prevented $21 billion in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $713,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Gulf Intracoastal Waterway, TX

AUTHORIZATION: Public Law 77-675 authorized the Laguna Madre Reach, and the Water Resources Development Act of 1996 authorized the work at Aransas National Wildlife Refuge

LOCATION AND DESCRIPTION: The Texas portion of the Gulf Intracoastal Waterway (GIWW) navigation project extends from the Sabine River to Port Isabel, Texas, and includes several tributary channels. It consists of a 12-foot deep by 125-foot wide, shallow-draft channel, 423 miles long, and traverses the entire Texas Coast. The GIWW project also includes flood gates at the Brazos River and lock navigation structures at the Colorado River. Mooring basins and buoys are maintained in 11 separate locations along the length of the GIWW. The mooring basins support the heavy barge traffic.

FISCAL YEAR 2018 ALLOCATION: $34,753,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including maintenance dredging; electrical repairs at the Brazos River Flood Gates (BRFG) and Colorado River Locks (CRL); maintenance of existing mooring buoys; placement area improvements at Placement Area 88; and construction of beneficial use site K at Aransas Bay.

FISCAL YEAR 2019 ALLOCATION: $30,445,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including maintenance dredging; project condition surveys; hydrographic surveys; supervision and administration of maintenance contracts; contract facility repairs at CRL and BRFG; and maintenance of existing mooring buoys.

BUDGETED AMOUNT FOR FY 2020: M: $28,425,000 **O:** $6,850,000 **T:** $35,275,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $35,275,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance dredging ($19,385,000); placement area improvements ($6,350,000); maintenance of mooring buoys ($965,000); and Mouth of the San Bernard NEPA coordination ($150,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The Texas portion of the GIWW provides for an intermodal link between the Texas deep-draft and shallow-draft ports. This intermodal link is essential in connecting Texas ports and waterways with the petrochemical industries and refineries staggered along the Texas coast. It also provides a critical link between the Texas ports with national coastal and inland port facilities. The GIWW is ranked the third Inland Waterway in the Nation with respect to commercial tonnage.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $8,371,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Hords Creek Lake, TX

AUTHORIZATION: River and Harbor Act of 1945

LOCATION AND DESCRIPTION: Hords Creek Lake is about 13 miles west of the City of Coleman, Texas located in the County of Coleman. This is a multipurpose project for flood control, recreation, and fish and wildlife. The project consists of an earth fill embankment and one conduit controlled by two gates. The water supply outlet is a cast iron pipe and the controlled conduit outlet has two slide gates. Flood control storage is 16,670 acre-feet and water supply storage is 5,684 acre-feet. Three recreation areas cover 1,215 acres.

FISCAL YEAR 2018 ALLOCATION: $2,016,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,878,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including bridge repair; repair public roadway on top of dam; and repair toe drain and riprap.

BUDGETED AMOUNT FOR FY 2020: M: $199,000 **O:** $1,286,000 **T:** $1,485,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $796,000 – Funds will be used for commonly performed O&M work.

RC: $612,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $77,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Hords Creek Lake is estimated to have prevented $1 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $45,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Jim Chapman Lake, TX

AUTHORIZATION: Flood Control Act of 1954 as amended by the Flood Control Act of 1955

LOCATION AND DESCRIPTION: Jim Chapman Lake is four miles southeast of the City of Cooper in Delta and Hopkins Counties of Texas. It is located on the South Sulphur River. The project consists of an earth fill embankment, an uncontrolled spillway, and an outlet works tower. Five recreation areas cover 2,977 acres.

FISCAL YEAR 2018 ALLOCATION: $1,955,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including boundary inspection and maintenance.

FISCAL YEAR 2019 ALLOCATION: $1,969,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a periodic assessment; dam embankment erosion repair; hydraulic steel structure inspection; repair of stilling basin stairs; and a bridge inspection.

BUDGETED AMOUNT FOR FY 2020: M: $662,000 **O:** $1,410,000 **T:** $2,072,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,704,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including stilling basin inspection ($180,000); install safety railing on intake tower ($85,000); cost savings measure package to replace office lighting ($75,000); install rescue retrieval devise ($65,000); and inspect stilling basin – sonar ($55,000).

RC: $120,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $235,000 – Funds will be used for commonly performed O&M work.

WS: $13,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Jim Chapman Lake is estimated to have prevented $28 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $129,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Joe Pool Lake, TX

AUTHORIZATION: River and Harbor Act of 1965

LOCATION AND DESCRIPTION: Joe Pool Lake is located in Dallas, Tarrant, and Ellis Counties of Texas, ten miles southwest of the City of Dallas. The project consists of an earth fill dam with an uncontrolled concrete spillway. Total storage capacity is 304,500 acre-feet. There are five recreation areas covering 3,730 acres.

FISCAL YEAR 2018 ALLOCATION: $2,526,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including the Master Plan.

FISCAL YEAR 2019 ALLOCATION: $2,619,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including the Master Plan, woody vegetation removal on embankment, spillway channel topography, and repairs to the emergency spillway.

BUDGETED AMOUNT FOR FY 2020: M: $173,000 **O:** $1,242,000 **T:** $1,415,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,042,000 – Funds will be used for commonly performed O&M work.

RC: $218,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $135,000 – Funds will be used for commonly performed O&M work.

WS: $20,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Joe Pool Lake is estimated to have prevented $5 billion in cumulative flood damages since construction in 1968.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,368,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lake Kemp, TX

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Lake Kemp is 40 miles southwest of the City of Wichita Falls in Wichita County, Texas, and located on the Wichita River at river mile 126.7. This is a multi-purpose project authorized for flood control and conservation. The project consists of a rolled earth fill embankment and spillway having a total length of 8,890 feet and a maximum height of 115 feet above the streambed. At the top of the flood control pool the lake covers 15,590 acres.

FISCAL YEAR 2018 ALLOCATION: $288,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $277,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $35,000 **O:** $233,000 **T:** $268,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $268,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The City of Wichita Falls and Wichita County Water Improvement District Number 2 jointly own Lake Kemp. District Number 2 manages the conservation storage and the United States Army Corps of Engineers manages the flood control storage.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $31,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lavon Lake, TX

AUTHORIZATION: River and Harbor Act of 1945 and the Flood Control Acts of 1946 and 1962

LOCATION AND DESCRIPTION: Lavon Lake is located in Collin County, on the East Fork of the Trinity River, about 22 miles northeast of the City of Dallas. The project consists of an earth embankment, a gate-controlled concrete spillway with 12 tainter gates, and five gate controlled conduits. Flood control storage is 291,600 acre-feet and water supply storage is 443,800 acre-feet. Nineteen recreation areas cover 2,834 acres.

FISCAL YEAR 2018 ALLOCATION: $3,728,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including boundary inspection and maintenance.

FISCAL YEAR 2019 ALLOCATION: $4,292,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including security system repairs and repair of guardrail on embankment road.

BUDGETED AMOUNT FOR FY 2020: M: $936,000 **O:** $2,979,000 **T:** $3,915,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,860,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspection ($12,000) and dewater spillway ($150,000).

RC: $1,400,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $640,000 – Funds will be used for commonly performed O&M work and specific work for real estate encroachments ($165,000).

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Lavon Lake is estimated to have prevented $723 million in cumulative flood damages prevented.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $389,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lewisville Dam, TX

AUTHORIZATION: River and Harbor Act of 1945

LOCATION AND DESCRIPTION: Lewisville Dam is 22 miles northwest of the city of Dallas in Denton County. It is located on the Elm Fork of the Trinity River, 30 river miles above its confluence with the Trinity River. The project consists of a rolled earth fill dam, 32,888 feet in length, with a 16-foot diameter flood conduit, controlled by three broom-type gates, and a 560 foot concrete spillway. Flood control storage capacity is 340,800 acre-feet and water supply storage is 598,400 acre-feet. Lewisville Dam has 25 recreation areas covering 4,014 acres.

FISCAL YEAR 2018 ALLOCATION: $4,526,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including a Master Plan update.

FISCAL YEAR 2019 ALLOCATION: $7,481,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to update facility security, to install separate utility meters, a bridge inspection, relocate fiber optic line, woody vegetation removal, drainage ditch modification, gate repairs, and to continue work on the Master Plan report.

BUDGETED AMOUNT FOR FY 2020: M: $743,000 **O:** $2,840,000 **T:** $3,583,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,899,000 – Funds will be used for commonly performed O&M work.

RC: $960,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $704,000 – Funds will be used for commonly performed O&M work.

WS: $20,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Lewisville Lake is estimated to have prevented $43 billion in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,044,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Navarro Mills Lake, TX

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: Navarro Mills Lake is 16 miles southwest of the City of Corsicana in Navarro County, Texas. It is located on Richland Creek in the Trinity River Basin. The project consists of an earth fill dam, a controlled spillway using six tainter gates, and two conduits controlled by slide gates. Flood storage capacity is 149,200 acre-feet. Six recreation areas cover 1,195 acres.

FISCAL YEAR 2018 ALLOCATION: $2,521,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,383,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including conducting a security risk audit.

BUDGETED AMOUNT FOR FY 2020: M: $378,000 **O:** $1,983,000 **T:** $2,361,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,367,000 – Funds will be used for commonly performed O&M work.

RC: $849,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $130,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Navarro Mills Lake is estimated to have prevented $103 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $166,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: North San Gabriel Dam and Lake Georgetown, TX

AUTHORIZATION: Flood Control Acts of 1954 and 1962

LOCATION AND DESCRIPTION: The North San Gabriel Dam and Georgetown Lake are 3.5 miles west of the City of Georgetown in Williamson County, Texas, and located on the North Fork of the San Gabriel River. The project consists of a rock fill dam with an impervious earthen core. The flood control outlet works include two hydraulically operated gates. Water supply storage is 29,200 acre-feet and flood control storage capacity is 93,700 acre-feet. Five recreation areas cover 1,638 acres.

FISCAL YEAR 2018 ALLOCATION: $2,532,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $4,189,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including repair of embankment road, a Master Plan report, to convert an existing wastewater system, replace deteriorationg water lines, and to install utility meters.

BUDGETED AMOUNT FOR FY 2020: M: $480,000 **O:** $2,787,000 **T:** $3,267,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,537,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspection ($141,000) and hydraulic steel structure inspection ($27,000).

RC: $955,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $760,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: North San Gabriel Dam and Georgetown Lake is estimated to have prevented $19 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $286,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: O. C. Fisher Dam and Lake, TX

AUTHORIZATION: Flood Control Acts of 1941 and 1944

LOCATION AND DESCRIPTION: O. C. Fisher Dam and Lake is near the City of San Angelo in Tom Green County, Texas, and located on the North Concho River. The project consists of an earth fill embankment, an uncontrolled spillway, six gate-controlled intakes, and two flood control conduits. Flood control storage is 276,900 acre-feet and water supply storage is 79,500 acre-feet. Seven recreation areas cover 4,710 acres.

FISCAL YEAR 2018 ALLOCATION: $1,080,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,822,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a periodic assessment and roadway repairs on the dam.

BUDGETED AMOUNT FOR FY 2020: M: $707,000 **O:** $980,000 **T:** $1,687,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,456,000 – Funds will be used for commonly performed O&M work.

RC: $63,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $160,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: O. C. Fisher Lake is estimated to have prevented $21 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $22,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Pat Mayse Lake, TX

AUTHORIZATION: Flood Control Act of 1962

LOCATION AND DESCRIPTION: Pat Mayse Lake is 12 miles north of the City of Paris in Lamar County, Texas. It is located at river mile 4.6 on Sanders Creek, a tributary of the Red River. This is a multi-purpose project authorized for flood control, water supply, recreation, and fish and wildlife. The project consists of an 8,780 foot long rolled earth fill embankment with an uncontrolled spillway. At conservation pool depth the lake covers 5,940 acres.

FISCAL YEAR 2018 ALLOCATION: $1,222,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $1,383,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $52,000 **O:** $1,050,000 **T:** $1,102,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $430,000 – Funds will be used for commonly performed O&M work.

RC: $573,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $84,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Since construction in 1967, Pat Mayse Lake is estimated to have prevented $63 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $108,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Proctor Lake, TX

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: Proctor Lake is eight miles northeast of the City of Comanche, Texas, in Comanche County on the Leon River. The project consists of an earth fill dam with a concrete spillway, controlled by eleven tainter gates and two low-flow conduits. Flood control storage is 314,800 acre-feet and water supply storage is 60,524 acre-feet. Four recreation areas cover 1,210 acres.

FISCAL YEAR 2018 ALLOCATION: $2,368,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,639,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activites including a periodic assessment, a bridge inspection, and security assessments.

BUDGETED AMOUNT FOR FY 2020: M: $309,000 **O:** $2,149,000 **T:** $2,458,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,578,000 – Funds will be used for commonly performed O&M work.

RC: $734,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $135,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Proctor Lake is estimated to have prevented $113.8 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $117,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ray Roberts Lake, TX

AUTHORIZATION: Flood Control Act of 1965

LOCATION AND DESCRIPTION: Ray Roberts Lake is located in Denton, Cook, and Grayson Counties of Texas near the City of Denton. The project consists of an earth fill dam, an uncontrolled spillway, and a gated conduit through the dam with two sluice gates. Flood control storage capacity is 52,400 acre-feet. Ten recreation areas cover 3,810 acres.

FISCAL YEAR 2018 ALLOCATION: $1,611,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including security system repairs.

FISCAL YEAR 2019 ALLOCATION: $2,150,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including shoreline erosion repairs.

BUDGETED AMOUNT FOR FY 2020: M: $280,000 **O:** $1,437,000 **T:** $1,717,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,300,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspections ($100,000).

RC: $60,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $342,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Ray Roberts Lake is estimated to have prevented $33 billion in flood damages since its construction.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $608,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Sam Rayburn Dam and Reservoir, TX

AUTHORIZATION: River and Harbor Acts of 1945 and 1948

LOCATION AND DESCRIPTION: The Sam Rayburn Dam and Reservoir project is ten miles northwest of the City of Jasper in Angelina, San Augustine, Sabine, Nacogdoches, and Jasper Counties of Texas, on the Angelina River. Features of the dam include an earthen embankment, combined concrete power intake and flood control outlet works, a labyrinth weir spillway, and two gate controlled conduits. Flood control storage capacity is 1,099,500 acre-feet, power pool storage is 1,446,500 acre-feet, and water supply storage is 43,000 acre-feet. Twenty-eight recreation areas cover 3,151 acres. The project contains two 30-megawatt hydropower generators.

FISCAL YEAR 2018 ALLOCATION: $7,341,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities includingresurfacing roadways and boundary inspection and maintenance.

FISCAL YEAR 2019 ALLOCATION: $8,873,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repair of shoreline erosion; rehabilitate machine platforms and operators; repair slide on the left abutment of embankment; replace radio tower; investigate joint sealant and prepare plans and specifications for repairs to the stilling basin walls; repair spillway joints; replace communication system; perform an energy audit; perform a comphrehesive power review; and perform an assessment of physical and cyber security.

BUDGETED AMOUNT FOR FY 2020: M: $1,797,000 **O:** $5,481,000 **T:** $7,278,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $963,000 – Funds will be used for commonly performed O&M work.

RC: $1,471,000 – Funds will be used for commonly performed O&M work.

H: $2,612,000 – Funds will be used for commonly performed O&M work.

EN: $895,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Sam Rayburn Dam and Reservoir is estimated to have prevented $1.8 billion in cumulative flood damages. FY 2017 hydropower production totaled 97,027 megawatt-hours**.** As a multiple purpose project with power, the project's budget includes Joint activities, with total allocation of $1,326,000 shared between business lines as follows: HYD – 1%, FRM – 44%, and ENS – 55%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a hydraulic steel structure inspection ($80,000).

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $314,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Somerville Lake, TX

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: Somerville Lake is two miles south of the City of Somerville, Texas, and located in Burleson, Lee, and Washington Counties on Yegua Creek. This is a multipurpose project for flood control, water supply, recreation and fish and wildlife. The project consists of an earth fill dam, a dike, an uncontrolled spillway, a conduit, and a gated intake. Flood control storage capacity is 347,400 acre-feet and water supply storage is 158,900 acre-feet. Eleven recreation areas cover 3,599 acres.

FISCAL YEAR 2018 ALLOCATION: $4,117,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including to repair the service gates.

FISCAL YEAR 2019 ALLOCATION: $4,855,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including stilling basin repairs, repair of the ogee weir, repair/replace shelter over operating deck to mitigate for arc flash, embankment road repairs, woody vegetation removal, a periodic assessment, and installing utility meters.

BUDGETED AMOUNT FOR FY 2020: M: $277,000 **O:** $2,737,000 **T:** $3,014,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,452,000 – Funds will be used for commonly performed O&M work.

RC: $1,301,000 – Funds will be used for commonly performed O&M work

H: N/A

EN: $250,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Somerville Lake is estimated to have prevented $295 million in cumulative flood damages since its construction in 1967.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $997,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Stillhouse Hollow Dam, TX

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: Stillhouse Hollow Lake is five miles southwest of the City of Belton in Bell County, Texas, and located on the Lampasas River, 16 river miles upstream from its confluence with the Little River. The project consists of an earth fill dam, a dike section, and an uncontrolled spillway. Controlled flood releases are accomplished through two hydraulically-operated floodgates. Flood control storage capacity is 394,700 acre-feet and water supply storage is 232,000 acre-feet. Seven recreation areas cover 2,089 acres.

FISCAL YEAR 2018 ALLOCATION: $5,017,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including to start repairs on the service flood gates.

FISCAL YEAR 2019 ALLOCATION: $6,555,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to continue repairs on the service flood gates, repair the south sluice flood gates, replace an exiting weir, replace existing water lines in park, performe an energy audit, and repair the outlet works channel.

BUDGETED AMOUNT FOR FY 2020: M: $2,534,000 **O:** $2,218,000 **T:** $4,752,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $3,145,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work including bridge inspection ($20,000).

RC: $974,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $622,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Stillhouse Hollow Lake is estimated to have prevented $176 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $2,477,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Town Bluff Dam, B.A. Steinhagen Lake and Robert Douglas Willis Hydropower Project, TX

AUTHORIZATION: River and Harbor Act of 1945

LOCATION AND DESCRIPTION: Town Bluff Dam, B. A. Steinhagen Lake and the Robert Douglas Willis Hydropower Project are located in Tyler and Jasper Counties, on the Neches River, one-half mile from the City of Town Bluff, Texas. The project consists of an earth fill, concrete-capped embankment that serves as an uncontrolled spillway. The outlet works are controlled by six tainter gates. The lake has ten recreation areas covering 2,185 acres and two 3.7-megawatt hydropower generators.

FISCAL YEAR 2018 ALLOCATION: $4,706,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including to repair cracked welds on the tainter gates.

FISCAL YEAR 2019 ALLOCATION: $7,526,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repair concrete on dam; embankment repairs; riprap for bank stabilization; repair cracks in spillway and outlet works; repairs to discharge channel of spillway; and repair of concrete slab to overflow embankment.

BUDGETED AMOUNT FOR FY 2020: M: $2,466,000 **O:** $2,360,000 **T:** $4,826,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,929,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work including repair of ongoing tainter gate hoist platforms, welds, and wire rope ($590,000); bulkheads for low flow gates and perform hydraulic steel structure inspection ($565,000); project office security lighting ($160,000); and repair damaged concrete on dam ($260,000).

RC: $560,000 – Funds will be used for commonly performed O&M work.

H: $1,017,000 – Funds will be used for commonly performed O&M work.

EN: $320,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The Town Bluff Dam and BA Steinhagen Lake project is estimated to have prevented $326 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $40,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Waco Lake, TX

AUTHORIZATION: Flood Control Act of 1954

LOCATION AND DESCRIPTION: Waco Lake is two miles west of Waco, Texas, and located in McLennan County on the Bosque River, 4.6 miles above its confluence with the Brazos River. The project consists of a rolled, earth fill dam and a spillway controlled by fourteen tainter gates. One 20-foot diameter conduit in outlet works is controlled by three broome-type tractor sluice gates. Flood control storage capacity is 573,300 acre-feet and water supply storage is 135,700 acre-feet. Eleven recreation areas cover 3,599 acres.

FISCAL YEAR 2018 ALLOCATION: $7,103,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including phase 2 tainter gate repairs and security upgrades.

FISCAL YEAR 2019 ALLOCATION: $5,612,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing the outlet bridge and phase 3 repair of the tainter gates.

BUDGETED AMOUNT FOR FY 2020: M: $635,000 **O:** $2,585,000 **T:** $3,220,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,686,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work including project office upgrades ($250,000).

RC: $1,193,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $330,000 – Funds will be used for commonly performed O&M work.

WS: $11,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Waco Lake is estimated to have prevented $475 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $76,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Wallisville Lake, TX

AUTHORIZATION: River and Harbor Acts of 1945, 1946, and 1962 and the Supplemental Appropriations Act of 1983 (P.L. 98-63)

LOCATION AND DESCRIPTION: The Wallisville Lake project is a multi-purpose project on the Trinity River built to prevent salinity intrusion and provide water supply, recreation, navigation, and fish and wildlife enhancements. The project includes eight miles of earthen dam, an overflow spillway with a tainter gate assembly, and an 84-by-600-foot navigation lock with a sill depth of 16 feet for commerce and pleasure craft use.

FISCAL YEAR 2018 ALLOCATION: $2,778,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) activities. Funds were also used for specific work activities including continuation of the update to the Master Plan; creation of a water control manual; repair control structures; maintain boundary monumentation; and a period of record analysis of the saltwater barrier.

FISCAL YEAR 2019 ALLOCATION: $2,210,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $205,000 **O:** $2,588,000 **T:** $2,793,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,793,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $869,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Whitney Lake, TX

AUTHORIZATION: Flood Control Acts of 1941 and 1944

LOCATION AND DESCRIPTION: Whitney Lake is 5.5 miles southwest of the City of Whitney and 35 miles upstream from the city of Waco, Texas. It is located in Hill, Bosque, and Johnson Counties at river-mile 442 on the Brazos River. The project consists of a concrete gravity, earth fill dam, and a spillway that is controlled by seventeen tainter gates. The 23,560 acre lake has a flood storage capacity of 1,372,400 acre-feet and water supply storage is 248,100 acre-feet. The project has thirty-four recreation areas totaling 5,394 acres. The project contains two 17-megawatt hydropower generators.

FISCAL YEAR 2018 ALLOCATION: $5,665,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $10,450,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including maintenance and repair of tainter gates; bridge repairs; shoreline management plan supplement; replace project office roof; and upgrade and repair water systems.

BUDGETED AMOUNT FOR FY 2020: M: $2,003,000 **O:** $5,081,000 **T:** $7,084,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,675,000 – Funds will be used for commonly performed O&M work.

RC: $1,661,000 – Funds will be used for commonly performed O&M work.

H: $2,149,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work including a periodic inspection ($80,000).

EN: $785,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Whitney Lake is estimated to have prevented $1.1 billion in cumulative flood damages since its construction in 1950. As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $799,000 shared between business lines as follows: HYD – 22%, FRM – 69%, and ENS – 9%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work including bridge inspection ($20,000) and periodic inspection ($120,000).

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,314,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Wright Patman Dam and Lake, TX

AUTHORIZATION: Flood Control Act of 1946

LOCATION AND DESCRIPTION: Wright Patman Dam and Lake is nine miles southwest of the City of Texarkana and located in Cass and Bowie Counties on the Sulphur River. The project consists of an earth fill dam, an uncontrolled spillway, two conduits, and four gates. Flood control storage is 2,329,100 acre-feet and water supply storage is 321,900 acre-feet. A total of 23 recreation areas cover 3,243 acres.

FISCAL YEAR 2018 ALLOCATION: $3,918,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including cultural resources site repair and boundary surveying.

FISCAL YEAR 2019 ALLOCATION: $5,615,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repair of gates; an evaluation of the splitter and wing walls; maintenance and repair of access to conduit for confined space rescues; repair surface roads to to ditch; repair concrete on outlet works and spillway; replace water lines; and replace windows for park gatehouses.

BUDGETED AMOUNT FOR FY 2020: M: $1,703,000 **O:** $2,686,000 **T:** $4,389,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,382,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work including security repairs ($59,000), project office lighting ($240,000), and replace wire ropes on flood gates and overhead crane ($200,000).

RC: $1,247,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $745,000 – Funds will be used for commonly performed O&M work.

WS: $15,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Wright Patman Dam and Lake is estimated to have prevented $124 million in cumulative flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $53,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ball Mountain Lake, VT

AUTHORIZATION: Authorized by the Flood Control Acts of 1944 and 1954. Fish passage facility was authorized by Section 872 of Water Resources Development Act of 1986

LOCATION AND DESCRIPTION: Ball Mountain Dam is located along the West River, 29 miles above its junction with the Connecticut River in Brattleboro, Vermont. Dam is located about two miles north of Jamaica, Vermont and is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. Project consists of an earth-filled dam with rock slope protection, 915-feet long with a maximum height of 265 feet; an uncontrolled ogee weir spillway, 235-feet wide with a maximum discharge capacity of 150,000 cubic-feet-per-second; and a 13.5-foot diameter outlet conduit with 3 control gates. The reservoir provides 54,690 acre-feet of flood storage capacity to control runoff from its 172 square miles of drainage area.

FISCAL YEAR 2018 ALLOCATION: $1,759,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). In addition, non-routine work was initiated to replace a thrust nut cover and make repairs to flood control gate #1, and to complete an investigation of the conduit lining.

FISCAL YEAR 2019 ALLOCATION: $1,420,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. In addition, funds are also being used will also be used for specific work activities including bridge inspections, a periodic inspection, replace the thrust nut cover on flood control gate #2, design vehicular access to toe of dam, and perform an inspection of the inlet structure, conduct a wetlands survey and conduct a threatened and endangered species survey.

BUDGETED AMOUNT FOR FY 2020: **M:** 1,298,000 **O:** $908,000 **T:** $2,206,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,031,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities include bridge inspections ($8,000), repairs to Gates 2 and 3 ($1,000,000), repair hole in floatwell inlet pipe ($25,000), replace service conductor ($20,000), design a downstream monitoring weir system ($275,000) and develop an inspection checklist for critical items for use in the EAP ($10,000).

RC: $120,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $55,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project has prevented an estimated $334.5 million in flood damages since placed in service in 1961.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $334,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: North Hartland Lake, VT

AUTHORIZATION: The Flood Control Acts of 1938 and 1941

LOCATION AND DESCRIPTION: North Hartland Lake is located along the Ottauquechee River, 1.5 miles above its junction with Connecticut River, and one-mile northwest of North Hartland, Vermont. North Hartland Lake is operated as part of a system of flood control projects within the Connecticut River Basin. The project consists of an earth- and rock-filled dam with rock slope protection, 1,640-feet long with a maximum height of 185 feet; an earth- and rock-filled dike 2,110-feet long with a maximum height of 52 feet; an uncontrolled ogee weir spillway, 465-feet wide with a maximum discharge capacity of 160,900-cubic feet-per-second; a 14.25-foot diameter horseshoe shaped outlet conduit with four control gates through the dam: and a 36-inch diameter outlet conduit with a control gate through the dike. The reservoir provides flood storage of 74,150 acre-feet to control runoff from its drainage area of 220 square miles.

FISCAL YEAR 2018 ALLOCATION: $1,298,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including updating the inflow design flood and inspecting the conduit, to replace office septic system, pave outer parking lot, replace log boom logs, and complete advanced engineering design for gatehouse painting and lead abatement.

FISCAL YEAR 2019 ALLOCATION: $1,164,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including bridge inspections, a periodic inspection, a hydraulic steel inspection, to evaluate conditions at Dewey Mills Dam, replace log boom logs, and replace office septic system.

BUDGETED AMOUNT FOR FY 2020: **M:** $356,000 **O:** $656,000 **T:** $1,012,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $743,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including paving road to office and dam ($130,000).

RC: $109,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $160,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $310.1 million in flood damages since placed in service in 1961.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $365,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: North Springfield Lake, VT

AUTHORIZATION: The Flood Control Acts of 1938 and 1941

LOCATION AND DESCRIPTION: North Springfield Lake is in the Springfield, Vermont, along the Black River, 8.7 miles above its junction with the Connecticut River. North Springfield Lake is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of two earth- and rock-filled dams with rock slope protection. The main dam is 2,940-feet long with a maximum height of 120 feet and has an uncontrolled side channel spillway with an ogee weir, 384-feet wide with a maximum discharge capacity of 117,200-cubic feet-per-second, and a 12.75-foot diameter horseshoe shaped outlet conduit with three control gates. The north branch dam is 900-feet long with a maximum height of 75 feet and has an uncontrolled broad crested spillway weir, 200-feet wide with a maximum discharge capacity of 1,600-cubic feet-per-second, and an 8-inch diameter outlet conduit. The reservoir provides flood storage capacity of 51,100 acre-feet to control runoff from its drainage area of 158-square miles.

FISCAL YEAR 2018 ALLOCATION: $927,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to replace project generator, roof, windows, siding, and doors.

FISCAL YEAR 2019 ALLOCATION: $732,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: **M:** $687,000 **O:** $663,000 **T:** $1,350,000 1**/**

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,192,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including required bridge inspections ($10,000), clear right abutment area ($60,000), construct seepage collection and monitoring weir ($75,000), replace gatehouse power feed conduit ($325,000), prepare interim risk reduction measures plan ($15,000), overhead crane repairs ($15,000), replace gatehouse roof ($35,000), repack hydraulic gate cylinders ($25,000), and fall protection handrail gatehouse roof ($25,000).

RC: $71,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $87,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $298.0 million in flood damages since placed in service in 1960.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $162,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Townshend Lake, VT

AUTHORIZATION: The Flood Control Acts of 1944 and 1954. The fish passage facility was authorized by the Water Resources Development Act of 1986.

LOCATION AND DESCRIPTION: Townshend Lake is along the West River, 19.1 miles above its junction with the Connecticut River in Brattleboro, Vermont, and two miles west of Townshend, Vermont. The reservoir is operated as part of a system of flood control projects within the Connecticut River Basin. The project consists of an earth-filled dam with a spillway and outlet conduit.

FISCAL YEAR 2018 ALLOCATION: $1,881,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to complete maintenance painting of the spillway bridge, to perform video inspection of the relief well and its collector pipes, and to design and construction of automation of v-notch weirs at each collector pipe.

FISCAL YEAR 2019 ALLOCATION: $1,643,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including a bridge inspection, painting the spillway bridge, repairing guardrails, installing a solar array, automating the v-notch weirs, conducting a bathymetric sediment survey, and conducting a wetland survey.

BUDGETED AMOUNT FOR FY 2020: **M:** $327,000 **O:** $536,000 **T:** $863,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $674,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($10,000).

RC: $82,000 **–** Funds will be used for commonly performed O&M work.

H: N/A

EN: $107,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $241.6 million in flood damages since placed in service in 1961. The reservoir provides a flood storage capacity of 33.7 thousand acre-feet to control runoff from its net drainage area of 106 square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $194,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Union Village Dam, VT

AUTHORIZATION: The Flood Control Acts of 1936 and 1938

LOCATION AND DESCRIPTION: Union Village Dam is on the Ompompanoosuc River, about 4 miles upstream from its junction with the Connecticut River. The dam lies about one-fourth mile north of Union Village, Vermont, and 11 miles north of White River Junction, Vermont. Union Village Dam is operated as part of a comprehensive system of flood control projects within the Connecticut River Basin. The project consists of an earth- and rock-filled dam, 1,100-feet long with a maximum height of 170 feet; an uncontrolled ogee weir spillway, 388-feet wide with a maximum discharge capacity of 84,900-cubic feet-per-second; and a 13-foot diameter outlet conduit with two control gates.

FISCAL YEAR 2018 ALLOCATION: $1,480,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used to perform routine operation and maintenance (O&M). Funds were also used for specific work activities including to replace float well, motor control center and downstream gauge, and to conduct road and building repairs and complete the arc flash hazard assessment.

FISCAL YEAR 2019 ALLOCATION: $901,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including a periodic inspection, replacing the motor control center, and renovating the park ranger office.

BUDGETED AMOUNT FOR FY 2020: **M:** $408,000 **O:** $584,000 **T:** $992,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $794,000 **–** Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including bridge inspections ($18,000), overhead crane access ($20,000), replace the gatehouse furnace ($20,000), and purchase of flowage easement ($130,000).

RC: $73,000 **–** Funds will be used for commonly performed O&M work.

H: N/A

EN: $125,000 **–** Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $144.8 million in flood damages since being placed in service in 1950. The reservoir provides a flood storage capacity of 38.4 thousand acre-feet to control runoff from its net drainage area of 126-square miles.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $458,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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VIRGINIA

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Atlantic Intracoastal Waterway – Albemarle and Chesapeake Canal Route, VA

AUTHORIZATION: River and Harbor Act of 1899 and modified by Acts of 1912, 1925, 1930, 1934 and 1945 (P.L. 79-14)

LOCATION AND DESCRIPTION: The Albemarle and Chesapeake Canal (ACC), on the Atlantic Intracoastal Waterway (AIWW), is a naturally protected navigation route that generally parallels the Atlantic Ocean between the Southern Branch of the Elizabeth River and the Virginia-North Carolina state line in the North Landing River, a distance of 27 miles. This project provides for a channel 12 feet deep with widths of 90 feet in land cuts and from 125 to 250 feet in rivers. The project is a shallow draft waterway.

FISCAL YEAR 2018 ALLOCATION: $3,441,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $3,518,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed (O&M) work. Additional funding supports repair and replacement of one set of valves to the Great Bridge Lock on the Atlantic Intracoastal Waterway.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $679,000 **T:** $679,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $679,000 **–** Funds will be used for commonly performed O&M work.

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The Albemarle and Chesapeake Canal segment is particularly critical to the U.S. Navy which transports over 55 million gallons of jet fuel yearly from the Craney Island Fuel Depot in Portsmouth, Virginia to the Oceana Naval Air Station in Virginia Beach, Virginia. This waterway segment is part of the Atlantic Intracoastal Waterway connecting Norfolk, Virginia with the St. Johns River, Florida. Commercial and recreation vessels travel the waterway.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,030,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Atlantic Intracoastal Waterway – Dismal Swamp Canal Route, VA

AUTHORIZATION: River and Harbor Act of 1899 and modified by Acts of 1912 (P.L. 61-425), 1925 (P.L. 68-585), 1930 (P.L. 71-520), 1934 and 1945 (P.L. 79-14).

LOCATION AND DESCRIPTION: The Dismal Swamp Canal (DSC), on the Atlantic Intracoastal Waterway (AIWW), is a naturally protected navigation route that generally parallels the Atlantic coast between Norfolk, Virginia and the Pasquotank River in North Carolina. The canal is the oldest operating artificial waterway in the United States. The authorized depth of the canal is 10 feet; however, the project is currently maintained at a minimum depth of 6 feet. The project also consists of one highway drawbridge and navigation lock at Deep Creek, Virginia, one highway drawbridge and navigation lock at South Mills, North Carolina and three water control structures. The project is a shallow draft waterway.

FISCAL YEAR 2018 ALLOCATION: $1,983,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities. Funds were used for specific work activities to dredge the canal by the Feeder Ditch.

FISCAL YEAR 2019 ALLOCATION: $1,868,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Additional funding supports repair of the historical lock superintendent's house located on Route 17 of the Dismal Swamp Canal.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $640,000 **T:** $640,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $530,000 – Funds will be used for commonly performed O&M work.

FRM: $110,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The DSC provides navigation needs for vessels to travel the protected waterways of the AIWW in lieu of traveling through the Currituck Sound. The water control structures are manned in conjunction with the locks and bridges to control the water levels in Lake Drummond as required by Public Law 93-402. The DSC was placed on the National Register of Historical Places and registered as an ASCE Landmark in 1988 and in 2004 was included in the National Park Service's Underground Railroad Network to Freedom Program.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,404,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Gathright Dam and Lake Moomaw, VA

AUTHORIZATION: Flood Control Act of 1964

LOCATION AND DESCRIPTION: Gathright Dam and Lake Moomaw project is 43 miles above the confluence of the Jackson River with the James River, and 17 miles upstream of Covington, Virginia. The project is operated to reduce flood damages at downstream locations, augment low-flow conditions, and provide for water-based recreation. The project is part of the overall strategy for water control and flood risk reduction within the James River Basin.

FISCAL YEAR 2018 ALLOCATION: $2,324,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,572,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection and repairs of service and emergency gates.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $2,612,000 **T:** $2,612,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,612,000 **–** Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Project has prevented an estimated $310 million in flood damages since completion in 1982. The project provides improved water quality through low flow augmentation and enables the selective withdrawal of water at temperatures that provide a habitat suitable for a cold-water fishery in the Jackson River. The project also provides water-based recreation. Recreation services are provided at sites operated by the U.S. Forest Service.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $677,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: John H. Kerr Lake, VA & NC

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located on the Roanoke River, about 180 river miles above its mouth, in Mecklenburg County, Virginia and Vance County, North Carolina and provides flood risk management, recreation, hydropower, water supply and fish and wildlife conservation. The project includes a concrete gravity dam with wing and saddle dikes on the right and left banks, with a total length of over 4 miles. The reservoir is operated as a unit of a coordinated system of reservoirs in the Roanoke River basin. The project has an installed hydroelectric generating capacity of 268,000 kilowatts.

FISCAL YEAR 2018 ALLOCATION: $15,278,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included plans and specifications to install Island Creek transformer, 125VDC system replacement, Motor Control Center Repair and Supervisory Control Center, resolution of real estate encroachments, cultural resource plan and geospatial land data migration mapping.

FISCAL YEAR 2019 ALLOCATION: $13,682,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including develop plans and specifications for Island Creek transformer, develop Plans and Specifications to install an emergency outlet gate at Island Creek Pumping Station, Overhaul Floating Bulkhead Stop Log, Dam Safety maintenance flushing, and installing a circuit switch, repair of historic sites, cultural resources surveys, develop Historic properties plan, and review and update yield from water supply storage.

BUDGETED AMOUNT FOR FY 2020: M: $4,690,000 **O:** $6,904,000 **T:** $11,594,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,464,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including operational condition assessment (OCA) ($25,000), Vehicle Bridge Inspection ($22,000), and periodic assessment and inspection and report for Island Creek Dam ($216,000).

RC: $2,661,000 – Funds will be used for commonly performed O&M work.

H: $4,778,000 – Funds will be used for commonly performed O&M work.

EN: $1,435,000 – Funds will be used for commonly performed O&M work.

WS: $24,000 – Funds will be used for commonly performed O&M work**.**

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,232,000 shared between business lines as follows: HYD - 81% and FRM - 19%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including vehicle bridge inspection ($32,000).

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $4,993,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: John W. Flannagan Dam and Reservoir, VA

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: John W. Flannagan Dam and Reservoir is located in Dickenson County, VA and situated on the Pound River, a tributary of the Russell Fork of the Levisa Fork of the Big Sandy River. It is 1.8 miles above the mouth of the Pound River and 150.0 miles above the mouth of the Big Sandy River. The project includes operation and maintenance (O&M) of John W. Flannagan Dam and Reservoir. The lake is impounded by a rock-fill dam with a central impervious core. The dam has a maximum height of 250 feet and a top length of 916 feet. The dam was completed in 1964.

FISCAL YEAR 2018 ALLOCATION: $3,479,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities, corrected the spillway gate structural deficiency, initiated the update to the Water Control manual and provided for a temporary trailer, rent and utilities due to existing office building safety risk from rock slides.

FISCAL YEAR 2019 ALLOCATION: $3,268,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activity including rewiring intake and installing a new Motor Control Panel and replacing sluice gates.

BUDGETED AMOUNT FOR FY 2020: M: $734,000 **O:** $1,699,000 **T:** $2,433,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,800,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing inspection activities ($96,000).

RC: $390,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $205,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: $38,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented over $451,700,000 in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $244,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: North Fork of Pound River Lake, VA

AUTHORIZATION: Section 203 of Flood Control Act of 1960 (P.L. 86-645)

LOCATION AND DESCRIPTION: North Fork of Pound River Lake is located in Wise County, VA on the North Fork of the Pound River. The Pound River is a tributary of the Russell Fork of the Levisa Fork of the Big Sandy River, 1.1 miles above the mouth of North Fork of Pound River and 184 miles above the mouth of the Big Sandy River. The lake is impounded by a rock-fill dam with central impervious core at a height of 122 feet and length of 600 feet. The dam was completed in 1966.

FISCAL YEAR 2018 ALLOCATION: $584,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $860,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing the elevator control panel, replacing the emergency generator, and replacing or rebuilding the multi-level withdrawal gate hydraulic components.

BUDGETED AMOUNT FOR FY 2020: M: $203,000 **O:** $562,000 **T:** $765,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $589,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including completing a periodic inspection ($30,000).

RC: $38,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $105,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($100,000).

WS: $33,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented over $33,061,000 in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $8,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Philpott Lake, VA

AUTHORIZATION: Flood Control Act of 1944

LOCATION AND DESCRIPTION: The project is located on the Smith River about 45 miles above its junction with the Dan River in Franklin and Henry Counties, Virginia and provides flood risk management, recreation, hydropower and other benefits to the public. The project includes a concrete gravity dam about 900 feet long with a maximum height of 220 feet above the streambed. The reservoir is operated as a unit of a coordinated system of reservoirs in the Roanoke River basin. The project has an installed hydroelectric generating capacity of 14,000 kilowatts.

FISCAL YEAR 2018 ALLOCATION: $5,072,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Non-routine work included design work to replace the existing power plant control system, geospatial land data migration work, and sustainability work to replace outdoor security lighting with LED lights.

FISCAL YEAR 2019 ALLOCATION: $5,465,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including reallocation study for water supply, installing crack gauges in the spillway gallery and stairwells, performing critical dam safety inspection of the service and emergency gates and stop logs, establishing control and monitoring program, performing cultural resources management plan, revising Emergency Action Plan and Water Control manual, and cost savings measures to replace waterline at Philpott Park.

BUDGETED AMOUNT FOR FY 2020: M: $1,391,000 **O:** $4,113,000 **T:** $5,504,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $1,455,000 – Funds will be used for commonly performed O&M work.

H: $1,789,000 – Funds will be used for commonly performed O&M work.

EN: $720,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including surveys for Master Plan update ($450,000).

WS: $200,000 – Funds will be used for specific work activities including a water reallocation study ($200,000).

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,340,000 shared between business lines as follows: HYD - 45% and FRM - 55%. Funds will be used for commonly performed O&M work. The dam is currently rated as a Dam Safety Action Classification 3 structure.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,048,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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WASHINGTON

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Chief Joseph Dam, WA

AUTHORIZATION: Rivers and Harbor Act of 1946 as modified by the Fish and Wildlife Coordination Act of 1958.

LOCATION AND DESCRIPTION: Chief Joseph Dam is located in Bridgeport, Washington, 545 river-miles above the mouth of the Columbia River, and 51 river-miles downstream from Grand Coulee Dam. The dam consists of a 19-bay, gated, concrete, gravity spillway that abuts the right bank and connects to a curved non-overflow concrete section founded on a rock outcropping. The 2,047-foot-long powerhouse encloses 27 Francis turbines with the greatest installed capacity in the USACE of 2,614 megawatts, two station service generators, maintenance shops and control room, and the visitor center.

FISCAL YEAR 2018 ALLOCATION: $630,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $594,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $28,000 **O:** $560,000 **T:** $588,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $588,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M work of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: N/A

WS: N/A

OTHER INFORMATION: Chief Joseph Dam is the Corps' largest hydropower project. It supports 12 recreation areas that include a boat-in campground, fishing docks, boat ramps, picnicking, playgrounds, a splash park, trails, and interpretation center. This also includes a project visitor center with displays, restrooms, a theater, and tours in the powerhouse behind the security perimeter.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $216,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Columbia River Fish Mitigation, WA, OR, and ID

AUTHORIZATION:

- Federal Emergency Administration of Public Works of 1933 and the Public Works Administration of 1935;
- River and Harbor Acts of 1945 and 1950;
- Bonneville Project Act of 1937;
- Flood Control Acts of 1938, 1948, 1950, and 1954;
- Water Resources Development Act (WRDA) of 1986, Section 906(b)(1); WRDA of 1996, Section 511, as amended by WRDA of 1999, Section 582, and WRDA of 2007, Section 5025.

LOCATION AND DESCRIPTION: This Federal project operates and maintains the infrastructure installed by the Columbia River Fish Mitigation improvements to eight hydropower dams and the navigation locks on the Lower Columbia and Snake Rivers. These facilities include juvenile fish bypass systems, fish-passage monitoring facilities, fish-transport barges and moorage, spillway flow deflectors and weirs, adult fish ladders and passage monitoring facilities and lamprey passage facilities.

FISCAL YEAR 2018 ALLOCATION: $5,000 2/

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work for the Columbia River Fish Mitigation assets.

FISCAL YEAR 2019 ALLOCATION: $3,441,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $290,000 **O:** $2,307,000 **T:** $2,597,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,047,000 – Funds will be used for commonly performed O&M work.

FRM: $1,550,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The Columbia River Fish Mitigation program provides mitigation for the impact of USACE dams on migrating salmonids and lamprey. The mitigation measures are a result of the Northwest Power and Conservation Council's regional rebuilding efforts for upriver salmon stocks. In addition, the National Marine Fisheries Service (NMFS) listing of salmon as a threatened or endangered species mandated the need for mitigation measures. These mitigation measures were proposed in the NMFS Biological Opinions on operation of the Federal Columbia River Power System issued in 1995, 1998, 2000, 2004, 2008, the Columbia Basin Fish Accords of 2008, and the 2010 Supplemental Biological Opinion that includes the Adaptive Management Implementation Plan and amendments.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ In addition to the net allocation shown on this justification sheet, $1,883,000 was allocated to the following projects: Bonneville Lock and Dam, OR & WA ($343,000); Cougar Lake, OR ($80,000); Detroit Lake, OR ($193,000); Fall Creek Lake, OR ($321,000); Green Peter – Foster Lakes, OR ($280,000); Hills Creek Lake, OR ($19,000); John Day Lock and Dam, OR & WA ($298,000); Lookout Point Lake, OR ($55,000); and The Dalles Lock and Dam, WA & OR ($294,000). The funds are included in those projects' Fiscal Year 2018 Allocation amounts.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Howard A. Hanson Dam, WA

AUTHORIZATION: Rivers and Harbors Act and Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: The project is 35 miles east of Tacoma in King County, Washington and located on the upper reach of the Green-Duwamish River, 64 river miles above the mouth. It is in the City of Tacoma's municipal watershed, which is protected from public access.

FISCAL YEAR 2018 ALLOCATION: $3,681,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $14,453,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including construction of a new crane pad and rehabilitation of the spillway gates.

BUDGETED AMOUNT FOR FY 2020: M: $1,467,000 **O:** $2,880,000 **T:** $4,347,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $4,217,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection of the Stilling Basin ($75,000).

RC: N/A

H: N/A

EN: $130,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The facility provides flood protection within the Green-Duwamish watershed with an estimated $21.4 billion in prevented flood damages since 1962. The Biological Opinion and the Endangered Species Act mandate the construction and annual maintenance of mitigation sites consisting of gravel and woody debris nourishment to the river below the dam.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $255,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ice Harbor Lock and Dam, WA

AUTHORIZATION: Section 2 of the River and Harbor Act of 1945 **(**P.L. 79-14)

LOCATION AND DESCRIPTION: Project is located in Eastern Washington on the Snake River about 12 miles east of Pasco, Washington. The project is part of the Federal Columbia River Power System. The project includes the dam, a powerhouse with an installed capacity of 603 Megawatts, a navigation lock with a vertical lift of 100 feet, moderate-use waterway, two fish ladders, reservoir that has a water surface area of 9,200 acres, 3,576 acres of land that provides recreation facilities and wildlife mitigation habitat, and a juvenile fish bypass facility.

FISCAL YEAR 2018 ALLOCATION: $6,806,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including to design a water treatment system at Fishhook Park; to design the spillway gate system to include 10 spillway gates, mechanical and electrical systems; and to purchase and install one plug-in electric vehicle charging station.

FISCAL YEAR 2019 ALLOCATION: $5,084,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repair of Coffer Cell #4 ($60,000).

BUDGETED AMOUNT FOR FY 2020: M: $4,097,000 **O:** $2,906,000 **T:** $7,003,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $3,150,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including downstream approach maintenance dredging ($900,000), design for the upstream navigation lock tainter gate, machinery, and controls replacement ($400,000), and periodic inspections ($4,000).

FRM: N/A

RC: $1,155,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M for the hydropower facilities is directly funded by the Power Marketing Agency (PMA).

EN: $400,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $2,298,000 shared between business lines as follows: NAV – 100%. Funds will be used for commonly performed O&M work. Traffic through the navigation lock consists of grain, petroleum products, fertilizer, wood products and miscellaneous cargo. There are 3.5 thousand acres of land that are utilized for public recreation purposes, wildlife habitat, wildlife mitigation and water connected industrial development.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $963,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is 0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lake Washington Ship Canal, WA 2/

AUTHORIZATION: River and Harbor Act of 1910, House Document 953, 60th Congress

LOCATION AND DESCRIPTION: Located in the City of Seattle, King County, Washington, the 30-foot deep canal connects Puget Sound on the west with Lake Washington eight miles to the east. A dam, a gated spillway, a fish ladder and two navigational locks are located one and one-half miles east of the west entrance. The canal and locks provide a deep-draft navigation link from the freshwater Lake Washington and Lake Union to the saltwater Puget Sound.

FISCAL YEAR 2018 ALLOCATION: $1,138,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $1,068,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $202,000 **O:** $1,058,000 **T:** $1,260,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

FRM: N/A

RC: $723,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $537,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities, including updating the master plan ($125,000).

WS: N/A

OTHER INFORMATION: The recreation area of the Lake Washington Ship Canal project supports three public use areas that includes the Corps' only botanical garden, a fish ladder, two salt-freshwater locks, waterside pedestrian trails and a water trail, interpretation, and a regional visitor center. The project stabilized the elevation of Lake Washington within a narrow range, allowing for the construction of floating bridges (Interstate 90 and State Route 520) across the lake to connect Seattle with its burgeoning eastern suburbs.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $251,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

2/ The amounts and descriptions on this justification sheet reflect only the activities for this project funded from the Operation and Maintenance account. Corresponding project activities funded from the Harbor Maintenance Trust Fund are listed on a separate justification sheet.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Little Goose Lock and Dam, WA

AUTHORIZATION: Section 2 of the River and Harbor Act of 1945 (P.L. 79-14)

LOCATION AND DESCRIPTION: Project is located in Eastern Washington on the Snake River about 50 miles west of Lewiston Idaho. The project is part of the Federal Columbia River Power System. The project includes the dam, a powerhouse with an installed capacity of 810 Megawatts, a navigation lock with a vertical lift of 98 feet, moderate-use waterway, two fish ladders, a reservoir that has a water surface area of 10,025 acres, 5,398 acres of land that provides recreation facilities and wildlife mitigation habitat, and juvenile fish holding, loading, and bypass facilities.

FISCAL YEAR 2018 ALLOCATION: $2,808,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,471,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including design of the preferred alternative to restore the north shore fish ladder jetty and design of the replacement of the adult fish collection channel sluice gates.

BUDGETED AMOUNT FOR FY 2020: M: $3,138,000 **O:** $1,335,000 **T:** $4,473,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $3,390,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspections ($18,000) and Navlock upper sill and monolith 4 waterstop repair ($1,500,000).

FRM: N/A

RC: $380,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $162,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an update to the 1969 master plan ($121,000).

WS: N/A

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $541,000 shared between business lines as follows: NAV – 100%. Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including facility physical/cyber security assessments ($5,000). Traffic through the navigation lock consists of grain, petroleum products, fertilizer, and wood products. There are 5 thousand acres of land that are utilized for public recreation purposes, wildlife habitat, wildlife mitigation and water connected industrial development.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $526,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lower Granite Lock and Dam, WA

AUTHORIZATION: Section 2 of the River and Harbor Act of 1945 (P.L. 79-14)

LOCATION AND DESCRIPTION: Project is located in Eastern Washington on the Snake River about 33 miles west of Lewiston, Idaho. The project is part of the Federal Columbia River Power System. The project includes the dam, a powerhouse with an installed capacity of 810 Megawatts, a navigation lock with a vertical lift of 100 feet, moderate-use waterway, one fish ladder, a system of levees and pumping plants, a reservoir that has a water surface area of 8,900 acres, 5,778 acres of land that provides recreation facilities and wildlife mitigation habitat, and juvenile fish holding, loading, and bypass facilities, and adult-fish trapping facilities.

FISCAL YEAR 2018 ALLOCATION: $5,439,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $4,304,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific activities including an update to the Master Plan, the purchase of a fish transportation truck and 1,000 gallon tank and a fish transportation tractor and 3,500 gallon tanker trailer.

BUDGETED AMOUNT FOR FY 2020: M: $1,547,000 **O:** $1,762,000 **T:** $3,309,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,825,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: $1,385,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $10,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $89,000 shared between business lines as follows: NAV – 100%. Funds will be used for commonly performed O&M work. Traffic through the navigation lock consists of grain, petroleum products, fertilizer, and wood products. There are 13 thousand acres of land that are utilized for public recreation purposes, wildlife habitat, wildlife mitigation and water connected industrial development.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,106,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Lower Monumental Lock and Dam, WA

AUTHORIZATION: Section 2 of the River and Harbor Act of 1945 (P.L. 79-14)

LOCATION AND DESCRIPTION: Project is located in Eastern Washington on the Snake River about 45 miles northeast of Pasco, Washington. The project is part of the Federal Columbia River Power System. The project includes the dam, a powerhouse with an installed capacity of 810 Megawatts, a navigation lock with a vertical lift of 98 feet, moderate-use waterway, two fish ladders, and a reservoir that has a water surface area of 6,590 acres, 8,336 acres of land that provides recreation facilities and wildlife mitigation habitat, and juvenile fish holding, loading, and bypass facilities.

FISCAL YEAR 2018 ALLOCATION: $3,600,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operations and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $3,421,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of a failed diffuser grating in North Fish Ladder, conducting an upstream gate reliability analysis and, an update to the Master Plan.

BUDGETED AMOUNT FOR FY 2020: M: $1,532,000 **O:** $1,387,000 **T:** $2,919,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,795,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including periodic inspection ($4,000).

FRM: N/A

RC: $450,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $146,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including the continuing update to the 1974 master plan ($161,000).

WS: N/A

OTHER INFORMATION: As a multiple purpose with power project, the project's budget includes Joint activities, with a total allocation of $528,000 shared between business lines as follows: NAV – 100%. Funds will be used for commonly performed O&M work. Traffic through the navigation lock consists of grain, petroleum products, fertilizer, and wood products. There are 8 thousand acres of land that are utilized for public recreation purposes, wildlife habitat, wildlife mitigation and water connected industrial development.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,105,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mill Creek Lake, WA

AUTHORIZATION: Flood Control Act of 1938 **(**P.L. 75-761)

LOCATION AND DESCRIPTION: Project is located in Eastern Washington on Mill Creek, River Mile 11.5, east of Walla Walla, Washington. The project was constructed to prevent flooding of the City of Walla Walla. The project includes the dam, a reservoir that has a gross storage capacity of 8,300 acre-feet of water, a flood control channel, 612 acres of land that provides recreation facilities and wildlife mitigation habitat, and a diversion dam and levee with two fish ladders.

FISCAL YEAR 2018 ALLOCATION: $4,438,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including for return canal expansion joint repairs, for needle gates replacement at Yellowhawk/Garrison Creek division works, for intake canal and diversion dam diffuser block replacement, and for armor rehabilitation on the return channel bank.

FISCAL YEAR 2019 ALLOCATION: $6,171,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacement of bridge corbels at the division works, construction of interior features for the new maintenance building, intake canal and diversion dam diffuser block repairs, diversion dam grouted riprap scour repairs, replace safety rails over division works, and repair and paving of reservoir road.

BUDGETED AMOUNT FOR FY 2020: M: $1,103,000 **O:** $1,643,000 **T:** $2,746,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,069,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including diversion dam low flow radial arm gate repairs ($346,000) and periodic inspections ($23,000).

RC: $402,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $275,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project consists of two main units, the Mill Creek Channel and Bennington Lake, and the off-channel reservoir and associated federal lands. The project provides for flood damage reduction, recreation, wildlife habitat and irrigation. Since 1942, more than $74.5 million in potential flood damages have been prevented by Mill Creek Project's combined storage and channel operations.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $512,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mount St. Helens Sediment Control, WA

AUTHORIZATION: Supplemental Appropriation Act of 1985 (P.L. 99-88)

LOCATION AND DESCRIPTION: The sediment retention structure is 36-miles east of Longview, WA and located on the North Fork Toutle River, a tributary of the Cowlitz River in Cowlitz County. The project consists of a sediment retention structure designed to decrease sediment transport to the Cowlitz and Columbia Rivers and reduce the risk of flooding.

FISCAL YEAR 2018 ALLOCATION: $265,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $134,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $43,000 **O:** $223,000 **T:** $266,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $266,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A
.
WS: N/A

OTHER INFORMATION: The project's authorized purpose is to provide a permanent solution to potential flooding on the Cowlitz River caused by sedimentation resulting from the eruption of Mount St. Helens.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Mud Mountain Dam, WA

AUTHORIZATION: Section 5 of the Flood Control Act of 1936 (P.L. 74-738)

LOCATION AND DESCRIPTION: The project is six miles southeast of Enumclaw, Washington and 38 miles east of Tacoma, Washington and located on the White River at river mile 30. The facility provides flood protection within the White River and lower Puyallup River watershed. When the original flood control project was built in 1948, an upstream fish trap and haul facility was constructed at the Buckley Barrier Structure, six miles downstream of the dam to facilitate migration. The facility is still used annually to capture salmonids for transportation upstream to a release site five miles above the dam.

FISCAL YEAR 2018 ALLOCATION: $4,987,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $6,146,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including design to improve Cascade Creek slope stability and continued construction oversight of the 9 ft tunnel liner replacement.

BUDGETED AMOUNT FOR FY 2020: M: $2,018,000 **O:** $4,528,000 **T:** $6,546,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $5,972,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including continued construction oversight of the 9ft tunnel liner replacement ($300,000) and hydraulic cylinder rehabilitation ($470,000).

RC: $308,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $266,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities to include an easement inspection ($34,000) and updating master plans ($90,000).

WS: N/A

OTHER INFORMATION: The Mud Mountain Dam project is a convenient stop-point along the Mt. Rainier Scenic Loop. It supports three recreation day use areas that include the Corps' only kid's swimming pool, picnicking, playgrounds, trails, viewing areas, and interpretation. The dam provides flood protection within the White River watershed with an estimated $3.1 billion in flood damages prevented since 1948. During the peak flood season, the dam provides up to 106 thousand acre-feet of flood storage.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $710,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Stillaguamish River, WA

AUTHORIZATION: The Flood Control Act of 1936 (P.L. 74-738)

LOCATION AND DESCRIPTION: The project is located downstream of Arlington in Snohomish County, in northwestern Washington; 47 miles north of Seattle. The project provides for channel and bank improvements to reduce bank erosion and channel changes on the Stillaguamish River. The project covers the area between Arlington and the head of Hat Slough, a distance of 15 miles, and on Cook Slough for 3 miles. The project includes revetments at 26 places on the river and structures at Cook Slough; a concrete control weir 275-feet long between steel, sheet-pile piers at the head to limit flow through the slough; and two cut-off channels, each about 900-feet long, to eliminate sharp bends.

FISCAL YEAR 2018 ALLOCATION: $300,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $2,888,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M. Funds are also being used for specific work activities including re-design and repair of the fish weir and construction of the designed modifications and upgrades needed on the fish weir to allow safe passage of fish.

BUDGETED AMOUNT FOR FY 2020: M: $97,000 **O:** $200,000 **T:** $297,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $297,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Since its construction in 1939, the project is estimated to have prevented $5.9 million in flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $8,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tacoma-Puyallup River, WA

AUTHORIZATION: The Flood Control Act of 1936 (P.L. 74-738), and the River and Harbor and Flood Control Act of 1938 (P.L. 75-685)

LOCATION AND DESCRIPTION: The project is located on the Puyallup River near Tacoma, Washington and is part of the flood protection infrastructure for the City of Tacoma. The project was planned in conjunction with Mud Mountain Dam, and affords protection against floods 50-percent greater than the maximum discharge of record.

FISCAL YEAR 2018 ALLOCATION: $224,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $176,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M.

BUDGETED AMOUNT FOR FY 2020: M: $47,000 **O:** $137,000 **T:** $184,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $184,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Since 1950, the project is estimated to have prevented $165 million in flood damages.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: The Dalles Lock and Dam, WA and OR

AUTHORIZATION: The Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: The Dalles Dam is 90 miles east of Portland on the Columbia River between Washington and Oregon. It is a multi-purpose with hydropower Federal project. It consists of a dam with spillways, fish passage, a navigation lock, a powerhouse, a reservoir (Lake Celilo), and recreation sites.

FISCAL YEAR 2018 ALLOCATION: $4,067,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) work. Funds were also used for specific work activities including a Lower Columbia spillway comprehensive assessment.

FISCAL YEAR 2019 ALLOCATION: 3,241,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $937,000 **O:** $2,670,000 **T:** $3,607,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $1,021,000 – Funds will be used for commonly performed O&M work.

FRM: N/A

RC: $594,000 – Funds will be used for commonly performed O&M work.

H: Commonly performed O&M of the hydropower facilities is directly funded by the Bonneville Power Administration.

EN: $331,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: As a multiple purpose project with power, the project's budget includes Joint activities, with a total allocation of $1,661,000 shared between business lines as follows: NAV – 100%. Funds will be used for commonly performed O&M work. The project provides for navigation and hydroelectric power generation. The powerhouse has 26 main generating units with a capacity of 1,800-megawatts, and generated 7,171,000 megawatt-hours of electricity in FY 2018, enough for 662,000 homes. It also provides fish-passage facilities including two ladders and a fish lock. Dispersed recreation occurs at four minimally developed sites and on over 4 thousand acres of lands and natural resource areas surrounding Lake Celilo.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $472,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Beech Fork Lake, WV

AUTHORIZATION: Section 203 of Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: The project is located in Wayne County, West Virginia on Beech Fork, a tributary of Twelvepole Creek, 2 miles southeast of Lavalette, WV. The project includes operation and maintenance (O&M) of Beech Fork Lake. The lake is impounded by a rolled earth fill dam with a maximum height of 86 feet and a crest length of 1,080 feet. The dam was completed in February of 1977.

FISCAL YEAR 2018 ALLOCATION: $1,965,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities, replacement the bulkhead crane and monorail system and replacement of water lines.

FISCAL YEAR 2019 ALLOCATION: $1,824,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities, repairing bypass discharge gates, replacing the downstream bridge, repairing the selective withdrawal gates, replacing the bulkhead crane, and fabricating the mattress bulkhead.

BUDGETED AMOUNT FOR FY 2020: M: $485,000 **O:** $1,226,000 **T:** $1,711,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,256,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including inspection activities ($49,000).

RC: $229,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $226,000 - Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: The project has prevented over $21,600,000 in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $26,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Bluestone Lake, WV

AUTHORIZATION: Section 5 of the Flood Control Act (FCA) of 1936 (P.L. 74-738) as amended by Section 4 of the FCA 1938 (P.L. 75-761) incorporating the Executive Order of the President 7183A of 1935

LOCATION AND DESCRIPTION: Bluestone Lake is in Summers County, WV, on the New River, a tributary of the Kanawha River; 64.8 miles above the mouth of the New River. The project includes operation and maintenance (O&M) of Bluestone Lake. The lake is impounded by a concrete gravity dam with a gated spillway. The top length of the dam is 2,048 feet with a maximum height of 165 feet. The dam was completed in December of 1947.

FISCAL YEAR 2018 ALLOCATION: $2,260,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities, conducting an emergency exercise, completing Plans & Specifications to replace crest gate machinery and replacement of enclosed gears.

FISCAL YEAR 2019 ALLOCATION: $4,846,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities, performing an instrumentation survey, security upgrades, updating the Interim Risk Reduction Measure Plan, and rehabilitation of the sluice deflectors.

BUDGETED AMOUNT FOR FY 2020: M: $723,000 **O:** $1,517,000 **T:** $2,240,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,699,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including periodic inspection ($80,000).

RC: $256,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $285,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000) and periodic inspection ($80,000).

WS: N/A

OTHER INFORMATION: The project has prevented over $2,278,000 in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $164,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Burnsville Lake, WV

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Burnsville Lake is located in Braxton County, WV on the Little Kanawha River. It is 124.2 miles above its confluence with the Ohio River and approximately 3 miles above the town of Burnsville. The project includes operation and maintenance (O&M) of Burnsville Lake. The lake is impounded by a rockfill embankment with impervious core dam with a gated spillway. The crest length of the dam is 1,400 feet. The dam was completed in January 1976.

FISCAL YEAR 2018 ALLOCATION: $2,470,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $3,208,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including an arc flash review, upgrades to the security measures, surveying the surface displacement monuments, replacing electric wires to the radio tower, replacing the sluice gate cylinder seals, rehabilitating the foundation drains, replacing the knife gate, spraying rip rap around the dam, and maintaining the Bulltown historic area.

BUDGETED AMOUNT FOR FY 2020: M: $630,000 **O:** $2,090,000 **T:** $2,720,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,502,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including an assessment of sluice gate hydraulic line corrosion ($29,000).

RC: $903,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $315,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: The project has prevented over $169,000,000 in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $20,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: East Lynn Lake, WV

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: East Lynn Lake is located on the East Fork of Twelvepole Creek, 10 miles above the mouth of East Fork and 42 miles above the mouth of Twelvepole Creek. The project includes operation and maintenance (O&M) of East Lynn Lake. The lake is impounded by a rolled earth-fill dam with an uncontrolled saddle spillway. The top length of the dam is 652 feet. The dam was completed in April 1971.

FISCAL YEAR 2018 ALLOCATION: $2,555,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities and funds to investigate the intake structure gate guides.

FISCAL YEAR 2019 ALLOCATION: $2,286,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including performing an instrumentation survey.

BUDGETED AMOUNT FOR FY 2020: M: $885,000 **O:** $1,759,000 **T:** $2,644,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,893,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing inspection activities ($4,000) and investigating deteriorating selective withdraw gate guides on Intake structure ($110,000).

RC: $480,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $271,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activity including completing a Historic Properties Management Plan ($71,000) and a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: The project has prevented over $110,200,000 in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $127,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Elkins, WV

AUTHORIZATION: Section 4 of the Flood Control Act of 1938 (P.L 75-761)

LOCATION AND DESCRIPTION: The project is located on the Tygart River at Elkins, Randolph County, West Virginia. Elkins is a local flood protection project.

FISCAL YEAR 2018 ALLOCATION: $15,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) of the project.

FISCAL YEAR 2019 ALLOCATION: $117,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including project requests from the sponsor.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $25,000 **T:** $25,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $25,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Elkins is estimated to have prevented more than $24,000,000 in damages since its completion in 1949.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $15,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Kanawha River Locks and Dams, WV

AUTHORIZATION: River and Harbor Acts of 1930 (P.L. 71-520) and 1935 (P.L. 74-409)

LOCATION AND DESCRIPTION: The Kanawha River Locks and Dams project is a moderate-use waterway located in West Virginia. It begins at the mouth of the Kanawha River at its confluence with the Ohio River and stretches 90.6 miles upstream. Located along this stretch of waterway are the London, Marmet and Winfield Locks and Dams.

FISCAL YEAR 2018 ALLOCATION: $15,258,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities, plans and specifications to replace the Winfield Lock & Dam (L&D) roller gates, repairs to the Winfield gate rim gears and seals, and repair and reinforce gate anchors at Winfield Lock & Dam.

FISCAL YEAR 2019 ALLOCATION: $11,387,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds will also be used for specific work activities including dredging activities, performing inspection activities, an instrumentation survey at Winfield L&D, replacing roller gate chain at London, repairing the roller gate at Winfield L&D, engineering and design to fabricate one replacement dam roller gate at Winfield L&D, and engineering and design to rehabilitate the pier at Marmet L&D.

BUDGETED AMOUNT FOR FY 2020: M: $5,550,000 **O:** $7,091,000 **T:** $12,641,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $12,532,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including arc flash for London & Marmet L&D ($50,000), inspection activities ($282,000), OCA Inspections ($24,000), and replacing lock crossover and gallery lighting at Winfield L&D ($40,000).

FRM: N/A

RC: $79,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $30,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The 5-year average tonnage of commodities transported on the Kanawha River Locks and Dams exceeds 12,900,000 tons.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,742,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ohio River Locks and Dams, WV, KY & OH

AUTHORIZATION: River and Harbor Acts of 1909 (P.L. 60-317) and 1935 (P.L. 74-409)

LOCATION AND DESCRIPTION: Ohio River Locks and Dams is located in West Virginia, Kentucky and Ohio and begins 127 miles downstream from Pittsburgh at mile 127 and continues to mile 438 on the Ohio River. The project includes Willow Island, Belleville, Racine, Robert C. Byrd, Greenup, and Captain Anthony Meldahl Locks and Dams (L&D), which are the six locks within the Huntington District located on the Ohio River.

FISCAL YEAR 2018 ALLOCATION: $28,207,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities and non-routine activities, including repairing the miter gates at Belleville L&D, installing middle wall anchors at Greenup L&D, repairing the harbor at R. C. Byrd L&D, complete installation of the miter gate Meldahl L&D and continue repairs to Greenup L&D middle lock wall.

FISCAL YEAR 2019 ALLOCATION: $32,056,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including inspection activities; repairing main lock miter gate and dewatering at Willow Island L&D; repairs to the middle lock wall, repairs to the lock wall concrete, and investigating the scour downstream of the dam at Greenup L&D; dewatering and repairs at Willow Island L&D; an instrumentation survey at Robert C. Byrd L&D; coordination activities on Barker House at Willow Island L&D; and security plans and specifications at Robert C. Byrd L&D, Belleville L&D, Greenup L&D monoliths grouting and R.C. Byrd L&D main chamber miter gate repairs, land acquisition and disposal management activities.

BUDGETED AMOUNT FOR FY 2020: M: $9,745,000 **O:** $14,616,000 **T:** $24,361,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $24,113,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($551,000); perform OCA inspection ($24,000); perform arc flash update at Willow Island L&D ($25,000); repairs to Middle Lock wall including anchoring at Greenup L&D ($2,200,000); and cost savings measure to replace gallery lighting at Belleville ($60,000).

FRM: N/A

RC: $48,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $200,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: The average annual tonnage of commodities transported on this waterway over the past five years exceeds 200,000,000 tons.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,190,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Ohio River Open Channel Work, WV, KY & OH

AUTHORIZATION: River and Harbor Acts of 1909 (P.L. 60-317) and 1935 (P.L. 74-409)

LOCATION AND DESCRIPTION: Ohio River Open Channel Work, WV, KY and OH begins downstream from Pittsburgh at mile 127 and continues to mile 438 on the Ohio River. The project requires annual dredging to maintain its authorized depth of nine feet.

FISCAL YEAR 2018 ALLOCATION: $2,797,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2019 ALLOCATION: $2,657,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work and for specific work activities include maintenance dredging.

BUDGETED AMOUNT FOR FY 2020: M: $1,995,000 **O:** $715,000 **T:** $2,710,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: $2,710,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance dredging ($2,126,000).

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The annual average tonnage of commodities transported on this waterway for the past five years exceeds 73 million tons. Approximately 60-percent of the funding is used to dredge the main approach channels to lock and dam projects.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $21,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: R. D. Bailey Lake, WV

AUTHORIZATION: Section 203 of Flood Control Act of 1962 (P.L. 87-874)

LOCATION AND DESCRIPTION: R. D. Bailey Lake is located about a mile northeast of the community of Justice in Mingo and Wyoming Counties in West Virginia. The lake lies 112 miles above the mouth of the Guyandotte River. The rock-fill dam has a concrete face at a maximum height of 310 feet, and a top length of 1,397 feet. The dam was completed in 1980.

FISCAL YEAR 2018 ALLOCATION: $2,610,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $2,178,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M activities. Funds are also being used for specific work activities including completing periodic inspection activities, initiating an arc flash review, and repairing the cavitation of the sluice gates.

BUDGETED AMOUNT FOR FY 2020: M: $872,000 **O:** $1,620,000 **T:** $2,492,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,090,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing inspection activities ($118,000) and upgrade all security lighting on the dam, intake structure, maintenance building and visitor center ($60,000).

RC: $274,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $128,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project has prevented over $398 million in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $83,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Stonewall Jackson Lake, WV

AUTHORIZATION: Flood Control Act of 1966 (P.L. 89-789)

LOCATION AND DESCRIPTION: Stonewall Jackson Dam is located in Lewis County at Brownsville, WV. It lies on the West Fork River, 73.9 miles above its junction with the Tygart River at Fairmont, where the two rivers meet to form the Monongahela River. Stonewall Jackson Lake is a multi-purpose reservoir.

FISCAL YEAR 2018 ALLOCATION: $1,252,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M).

FISCAL YEAR 2019 ALLOCATION: $1,525,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work. Funds are also being used for specific work activities including security upgrades and update of the Master Plan.

BUDGETED AMOUNT FOR FY 2020: M: $244,000 **O:** $1,222,000 **T:** $1,466,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,349,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including inspection activities ($18,000).

RC: $77,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $32,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Stonewall Jackson Lake is estimated to have prevented $286,000,000 in flood damages since its completion in 1990. Benefits include flood protection, low flow augmentation for water quality, water supply, fish and wildlife enhancement, and recreation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $94,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Summersville Lake, WV

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Summersville Lake is located in Nicholas County, WV on the Gauley River, a tributary of the Kanawha River. It is 34.5 miles above the mouth of the Gauley River and 131.5 miles above the mouth of the Kanawha River. It is a rock-fill dam with a central impervious core, and has a maximum height of 390 feet and top length of 2,280 feet. The dam was completed in 1966.

FISCAL YEAR 2018 ALLOCATION: $2,428,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities and to initiate the Master Plan update.

FISCAL YEAR 2019 ALLOCATION: $2,553,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M activities. Funds are also being used for specific work activities including investigating the butterfly valves, an arc flash analysis, and completing the Master Plan update.

BUDGETED AMOUNT FOR FY 2020: M: $857,000 **O:** $1,714,000 **T:** $2,571,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,527,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including replace intake gate knife valves ($100,000) and complete tree removal, grading and leveling ($80,000).

RC: $891,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $113,000 – Funds will be used for commonly performed O&M work.

WS: $40,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: The project has prevented over $906 million in damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $157,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Sutton Lake, WV

AUTHORIZATION: Section 4 of Flood Control Act of 1938 (P.L. 75-761)

LOCATION AND DESCRIPTION: Sutton Lake is located in Braxton County, WV on the Elk River, a tributary of the Kanawha River. It is 100.4 miles above the mouth of the Elk River and 158.9 miles above the mouth of the Kanawha River. The lake is impounded by a concrete gravity dam with a maximum height of 210 feet and a top length of 1,178 feet. The dam was completed in 1961.

FISCAL YEAR 2018 ALLOCATION: $2,416,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) activities.

FISCAL YEAR 2019 ALLOCATION: $2,497,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for routine O&M activities. Funds are also being used for specific work activities including inspection activities, completing the arc flash review, performing an instrumentation survey, replacing the project backhoe, replacing seals on water-tight doors, repairing alignment pins, replacing electric service to the maintenance building, and removing the 36-inch low flow valve in the dam from service.

BUDGETED AMOUNT FOR FY 2020: M: $846,000 **O:** $2,134,000 **T:** $2,980,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $2,018,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including performing inspections ($132,000) and repairing downstream culvert pipe erosion ($35,000). Also funds will be used for cost savings measures including replacing dam boiler furnace ($24,000), replacing damsite street lights ($24,000), and replacing windows in dam tower ($35,000).

RC: $674,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $288,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including a master plan update ($150,000).

WS: N/A

OTHER INFORMATION: The project has prevented over $511 million in flood damages over the course of its operation.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $80,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Tygart Lake, WV

AUTHORIZATION: Rivers and Harbors Act of 1935 (P.L. 74-409)

LOCATION AND DESCRIPTION: Tygart Dam is in Taylor County 2 miles south of Grafton, WV and 78 miles south of Pittsburgh. The dam is located on the Tygart River about 23.1 miles above the mouth of the river at Fairmont, WV. Tygart Lake is a multi-purpose reservoir located in Taylor and Barbour Counties.

FISCAL YEAR 2018 ALLOCATION: $3,275,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) plus replacement of the trash boom and deteriorated upper span of trash racks.

FISCAL YEAR 2019 ALLOCATION: $1,722,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including security upgrades and flowage easement activities.

BUDGETED AMOUNT FOR FY 2020: M: $223,000 **O:** $1,444,000 **T:** $1,667,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,545,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including resolution of encroachments ($20,000).

RC: $80,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: $34,000 – Funds will be used for commonly performed O&M work.

WS: $8,000 – Funds will be used for commonly performed O&M work.

OTHER INFORMATION: Tygart Lake is estimated to have prevented more than $1.2 billion in flood damages since its construction in 1938.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $1,633,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Eau Galle River Lake, WI

AUTHORIZATION: Flood Control Acts of 1944 and 1958; Fish and Wildlife Coordination Act of 1958; Rivers and Harbors Act of 1958; Water Supply Act of 1958

LOCATION AND DESCRIPTION: Eau Galle Lake is located on the Eau Galle River, immediately upstream of Spring Valley, WI and 30 miles above its mouth at Chippewa River and its tributary, Mines Creek. Spring Valley is about 45 miles east of St. Paul, MN, and 36 miles west of Eau Claire, WI. The Eau Galle project with its large rolled-earth dam controls the 64-square mile drainage basin of the Eau Galle River.

FISCAL YEAR 2018 ALLOCATION: $2,177,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were used for specific work activities including an update to the master plan; and repair, sandblast and painting of steel conduit liner.

FISCAL YEAR 2019 ALLOCATION: $821,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $35,000 **O:** $1,020,000 **T:** $1,055,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $718,000 – Funds will be used for commonly performed O&M work.

RC: $305,000 – Funds will be used for commonly performed O&M work.

H: N/A

ES: $32,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: The project is estimated to have prevented $11.5 million in flood damages since being placed into operation.

1/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2018 to FY 2019 is $152,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Fox River, WI

AUTHORIZATION: Act of 7 Jul 1870, as amended by the Act of 3 Mar 1875; the Rivers and Harbors Acts of 1886, 1890, 1896, 1902 (PL 57-154), 1907 (PL 59-168), 1925 (PL 68-585), and 1958 (PL 85-500); and the Water Resources Development Acts of 1986 (PL 99-662) and 1992 (PL 102-580).

LOCATION AND DESCRIPTION: The project is located on the Lower Fox River from Lake Winnebago to Green Bay, Wisconsin. The project includes nine dams consisting of concrete gravity spillways and tainter gate structures operated by lift machinery. The project is primarily operated for flood control purposes.

FISCAL YEAR 2018 ALLOCATION: $6,161,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M) including collection of water level data, operation of dams to regulate flows to support project uses (e.g., flood risk management, private hydropower, paper mills and municipal uses), dam safety data collection and inspections, and compliance with State and Federal historic preservation requirements. Funding for non-routine activities is being used to award contracts for the fabrication of new gate seals, and repair of dam gates, trunnion pins and pier concrete at Kaukauna Dam, as well as to complete efforts associated with compliance with USACE Critical Infrastructure and Resilience Program requirements. Emergency Funding was used to repair sinkholes at DePere Dam. Funding was also be used for compliance with State and Federal historic preservation requirements.

FISCAL YEAR 2019 ALLOCATION: $4,224,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including replacing gate seals at Lower Appleton Dam ($225,000), repairing the left abutment at Cedars Dam ($400,000), investigating sinkhole issues at Little Chute and Kaukauna Dams ($120,000), replacing walkways and railings over spillway sections of Upper Appleton Dam ($900,000), repairing the left abutment walkway at Menasha Dam ($150,000), and updating the Master Plan ($35,000).

BUDGETED AMOUNT FOR FY 2020: **M:** $9,087,000 **O:** $2,370,000 **T:** $11,457,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $11,423,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including repairing walkways and piers at Lower Appleton ($1,100,000) and DePere ($1,500,000), replacing gates and trunions at Lower Appleton ($2,100,000) and Upper Appleton ($3,700,000), conducting periodic assessments at Cedars Dam and DePere Dam ($210,000) and installing waterway safety signs ($250,000).

RC: N/A

H: N/A

EN: $34,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: Without continued dam operation, the risk of flooding increases, the State owned locks cannot operate and power plants/paper mills would lose pool and not be able to function.

There are a total of 24 paper and pulp plants located along the Fox River that draw water from the river for use in processing and power production.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $493,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Kewaunee Harbor, WI

AUTHORIZATION: Rivers and Harbors Act of 1881, as amended by the Rivers and Harbors Acts of 1910 (PL 61-264), 1935 (PL 74-409), and 1960 (PL 86-645).

LOCATION AND DESCRIPTION: Kewaunee Harbor is a low-use, deep-draft commercial harbor located in Wisconsin on the western shore of Lake Michigan at the mouth of the Kewaunee River. It is about 100 miles north of Milwaukee, WI and 27 miles south of Sturgeon Bay. The project provides for commercial navigation with 5,500 feet of maintained channels and includes 6,500 feet of navigation structures, including breakwaters and piers.

FISCAL YEAR 2018 ALLOCATION: $12,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for maintaining compliance with the National Historic Preservation Act and with the Historic Management Plan.

FISCAL YEAR 2019 ALLOCATION: $948,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work. Funds are also being used for specific work activities including dredging for navigation and sheet pile structure repairs.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $13,000 **T:** $13,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: N/A

H: N/A

EN: $13,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Sturgeon Bay Harbor & Lake Michigan Ship Canal, WI

AUTHORIZATION: Rivers and Harbors Act of 1873, as amended by the Rivers and Harbors Acts of 1892, 1902 (PL 57-154), 1935 (PL 74-409), and 1945 (PL 79-14).

LOCATION AND DESCRIPTION: Sturgeon Bay Harbor is located in Wisconsin on the west shore of Lake Michigan 52 miles northeast of Green Bay and 128 miles north of Milwaukee. The harbor is a low-use, deep-draft commercial harbor with 8.5 miles of maintained navigation channel. It has authorized depths of 22 to 23 feet and 20 feet within the turning basin. The project also includes 15,100 feet of navigation structures, including breakwaters and revetments. Sturgeon Bay is home to two ship builders and a U.S. Coast Guard search and rescue operation.

FISCAL YEAR 2018 ALLOCATION: $800,000

DESCRIPTIONS OF WORK FOR FY 2018: N/A

FISCAL YEAR 2019 ALLOCATION: $911,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed operation and maintenance (O&M) work.

BUDGETED AMOUNT FOR FY 2020: M: $0 **O:** $7,000 **T:** $7,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: N/A

RC: $7,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $51,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.

WYOMING

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APPROPRIATION TITLE: Operation and Maintenance, Fiscal Year 2020

PROJECT NAME: Jackson Hole Levees, WY

AUTHORIZATION: Flood Control Act of 1950 (P.L. 81-516)

LOCATION AND DESCRIPTION: Project is located in Western Wyoming on the Snake River near Jackson Hole Wyoming. The project includes 30.5 miles of levees located on both sides of the Snake River and 2.5 miles on the Gros Ventre River. The levees provide flood control protection.

FISCAL YEAR 2018 ALLOCATION: $1,795,000

DESCRIPTIONS OF WORK FOR FY 2018: Funds were used for routine operation and maintenance (O&M). Funds were also used for specific work activities including the installation of rock barbs on the John Dodge Levee.

FISCAL YEAR 2019 ALLOCATION: $582,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2020: M: $785,000 **O:** $350,000 **T:** $1,135,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2020:

N: N/A

FRM: $1,135,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: The project consists of levees constructed by non-federal sponsors prior to November 17, 1986 near Jackson, Wyoming between River Mile 963 on the Snake River near Moose, Wyoming and River Mile 939 on the Snake River at the Highway 26 bridge and from the mouth of the Gros Ventre River upstream to the Grand Teton National Park Boundary.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was $201,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is $0.