

Allegheny River, Lock and Dam 2

Project Description

Facility is located 6.7 miles upriver from the mouth of the Allegheny at Pittsburgh, across the river from Sharpsburg, PA. It was built in 1932-34 and began operations in October 1934. It is comprised of a 1,393 foot long fixed crest and a single 360ft x 56ft lock chamber which provide an 11 foot vertical lift.



Transportation Importance to the System

L/D 2 is the first of eight navigation facilities on the Allegheny River. From 2000 to 2007, Lock 2 averaged 5,912 recreation vessels, 1,485 commercial tows, and 2.2 million tons of cargo. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities. The principal commodity at Lock 2 is coal, which is transported into the C.W. Bill Young pool for power generation. Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility from 2000 to 2005 averaged \$20.1 million a year.

Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have significant detrimental effects to the local and regional economy. Failure of the dam or any critical lock component will result in increased transportation costs and delays to the shipment of critical raw materials for power production, manufacturing, and other commercial activities. Failure of dam will likely stop navigation and impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain Locks 2 at an acceptable level of risk is \$4.0M per year. Maintenance items include maintenance, repair, and/or replacement of lock operating equipment; lock valves; lock walls; and hydraulic systems. These costs are above and beyond the routine day to day maintenance of all system components.

**Allegheny River, C.W. Bill Young Lock and Dam
Project Description**

Facility is located 14.5 miles upriver from the mouth of the Allegheny at Pittsburgh, across from Acmeonia, PA. It was built in 1932-34 and began operations in October 1934. It is comprised of a 1,435.75 foot fixed crest dam and a single 360ft x 56ft lock chamber which provide an 11 foot vertical lift. Annual traffic is approximately 2.1 million tons of freight.



Transportation Importance to the System

C.W Bill Young Lock and Dam is the second of eight navigation facilities on the Allegheny River. From 2000 to 2007, the C.W. Bill Young Lock averaged 2,333 recreation vessels, 1,351 commercial tows, and 2.1 million tons of cargo. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities. The principal commodity at C.W. Bill Young is coal, which is transported upstream for pool for power generation. Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility from 2000 to 2005 averaged \$19.4 million a year.

Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have significant detrimental effects to the local and regional economy. Failure of the dam or any critical lock component will result in increased transportation costs and delays to the shipment of critical raw materials for power production, manufacturing, and other commercial activities. Failure of dam will likely stop navigation and impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain C.W. Bill Young Lock and Dam at an acceptable level of risk is \$3.1M per year. Maintenance items include maintenance, repair, and/or replacement of lock operating equipment; lock valves; lock walls; and hydraulic systems. These costs are above and beyond the routine day to day maintenance of all system components.

Allegheny River, Lock and Dam 4

Project Description

Facility is located 24.2 miles upriver from Pittsburgh, at Natrona, PA. It was built in 1920-1927 and began operations in September 1927. It is comprised of a 876 foot long fixed crest dam and a single 360ft x 56ft lock chamber which provides an 11 foot vertical lift.

Transportation Importance to the System

L/D 4 is the third of eight navigation facilities on the Allegheny River. From 2000 to 2007, Lock 4 averaged 2,123 recreation vessels, 1,747 commercial tows, and 1.2 million tons of cargo. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities. The principal commodities at Lock 4 are crude materials such as stone, sand, gravel, and cement. Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility from 2000 to 2005 averaged \$10.7 million a year.



Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have significant detrimental effects to the local and regional economy. Failure of the dam or any critical lock component will result in increased transportation costs and delays to the shipment of critical raw materials for power production, manufacturing, and other commercial activities. Failure of dam will likely stop navigation and impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain Lock 4 at an acceptable level of risk is \$1.7M per year. Maintenance items include maintenance, repair, and/or replacement of lock operating equipment; lock valves; lock walls; and hydraulic systems. These costs are above and beyond the routine day to day maintenance of all system components.

Allegheny River, Lock and Dam 5

Project Description

Facility is located 30.4 miles upriver from Pittsburgh, at Freeport, PA. It was built in 1920-1927 and began operations in 1927. It is comprised of a 632 foot fixed crest dam, and a single 360ft x 56ft lock chamber. Its 11.8 foot vertical lift is also used to operate a 9.5MW privately owned and operated hydropower facility.



Transportation Importance to the System

L/D 5 is the fourth of eight navigation facilities on the Allegheny River. From 2000 to 2007, Lock 5 averaged 1,517 recreation vessels, 626 commercial tows, and 0.5 million tons of cargo. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities. The principal commodities at Lock 5 are crude materials such as stone, sand, gravel, and cement. Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility from 2000 to 2005 averaged \$5.1 million a year.

Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have significant detrimental effects to the local and regional economy. Failure of the dam or any critical lock component will result in increased transportation costs and delays to the shipment of critical raw materials for power production, manufacturing, and other commercial activities. Failure of dam will likely stop navigation, halt operation of a 9.5MW hydropower facility, and impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain Lock 5 at an acceptable level of risk is \$1.3M per year. Maintenance items include maintenance, repair, and/or replacement of lock operating equipment; lock valves; lock walls; and hydraulic systems. These costs are above and beyond the routine day to day maintenance of all system components.

Allegheny River, Lock and Dam 6

Project Description

Facility is located 36.3 miles upriver from Pittsburgh, near Freeport, PA. It was built in 1927-1928 and began operations in October 1928. It is comprised of a 992 foot fixed crest dam, and a single 360ft x 56ft lock chamber. Its 12.2 foot vertical lift is also used to operate a 9.5MW privately owned and operated hydropower facility.



Transportation Importance to the System

L/D 6 is the fifth of eight navigation facilities on the Allegheny River. From 2000 to 2007, Lock 6 averaged 969 recreation vessels, 174 commercial tows, and 0.1 million tons of cargo. Cargo consists of coal, petroleum, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities. The principal commodities at Lock 6 are crude materials such as stone, sand, gravel, and cement. Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility from 2000 to 2005 averaged \$1.2 million a year

Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have significant detrimental effects to the local and regional economy. Failure of the dam or any critical lock component will result in increased transportation costs and delays to the shipment of critical raw materials for manufacturing and other commercial activities. Failure of dam will likely stop navigation, halt operation of a 9.5MW hydropower facility, and impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain Lock 6 at an acceptable level of risk is \$2.0M per year. Maintenance items include maintenance, repair, and/or replacement of lock operating equipment; lock valves; and hydraulic systems. These costs are above and beyond the routine day to day maintenance of all system components.

Allegheny River, Lock and Dam 7

Project Description

Facility is located 45.7 miles upriver from the mouth of the Allegheny at Pittsburgh, across from Kittanning, PA. It was built in 1928-1931 and began operations in November 1930. It is comprised of a 916 foot fixed crest dam and a single 360ft x 56ft lock chamber which provide an 13 foot vertical lift.



Transportation Importance to the System

L/D 7 is the sixth of eight navigation facilities on the Allegheny River. From 2000 to 2007, Lock 7 averaged 1,203 recreation vessels, 162 commercial tows, and 0.1 million tons of cargo. Cargo consists of coal, chemicals, crude materials, manufactured goods, farm products, manufactured machinery, and other commodities. The principal commodities at Lock 7 are crude materials such as stone, sand, gravel, and cement. Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility from 2000 to 2005 averaged \$1.1 million a year.

Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have significant detrimental effects to the local and regional economy. Failure of the dam or any critical lock component will result in increased transportation costs and delays to the shipment of critical raw materials for manufacturing and other commercial activities. Failure of dam will likely stop navigation and impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain Lock 7 at an acceptable level of risk is \$800K per year. Maintenance items include maintenance, repair, and/or replacement of lock operating equipment; lock gates, anchorages, and sills, lock valves; and dredging. These costs are above and beyond the routine day to day maintenance of all system components.

Allegheny River, Lock and Dam 8

Project Description

Facility is located 52.6 miles upriver from Pittsburgh, near Mosgrove, PA. It was built in 1928-1931 and began operations in May 1931. It is comprised of a 933 foot fixed crest dam, and a single 360ft x 56ft lock chamber. Its 17.9 foot vertical lift is also used to operate a 13.6MW privately owned and operated hydropower facility.



Transportation Importance to the System

L/D 8 is the seventh of eight navigation facilities on the Allegheny River. From 2000 to 2007, Lock 8 averaged 894 recreation vessels, 7,755 commercial tows, and 0.6 million tons of cargo. Cargo consists mostly of crude materials such as stone, sand, gravel, and cement. Construction and supply companies use this facility to move raw materials throughout the region. The transportation savings associated with this facility from 2000 to 2005 averaged \$4.4 million a year.

Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have significant detrimental effects to the local and regional economy. Failure of the dam or any critical lock component will result in increased transportation costs and delays to the shipment of critical raw materials for manufacturing and other commercial activities. Failure of dam will likely stop navigation, halt operation of a 13.6MW hydropower facility, and impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain Lock 8 at an acceptable level of risk is \$1.4M per year. Maintenance items include maintenance, repair, and/or replacement of lock operating equipment; lock gates, anchorages, and sills; and dredging. These costs are above and beyond the routine day to day maintenance of all system components.

Allegheny River, Lock and Dam 9

Project Description

Facility is located 62.2 miles upriver from Pittsburgh, near Rimer, PA. It was built in 1935-1938 and began operations in October 1938. It is comprised of a 918 foot fixed crest dam, and a single 360ft x 56ft lock chamber. Its 22 foot vertical lift is also used to operate a 18 MW privately owned and operated hydropower facility.



Transportation Importance

L/D 9 is the last of eight navigation facilities on the Allegheny River. Lock 9 primarily supports recreation traffic averaging almost 900 vessels per year. Non Recreational traffic passing Lock 9 has only averaged 8 vessels per year for the last 6 years. Lock 9 has not passed any commercial cargo the past 7 years.

Risk of economic impacts of unscheduled lock outages

Failure to provide adequate funding to maintain this facility will have little or no effect to commercial transportation costs associated with this facility. Failure of the dam or a lock component which results in the loss of pool will halt operation of a 18MW hydropower facility and will likely impact municipal and commercial water supplies until an emergency repair can be achieved.

Description of Work included in Optimum Plan

The projected 5 year (FY 2010 through FY 2014) average cost to operate and maintain Lock 9 at an acceptable level of risk is under \$200K per year. There is no maintenance work planned after FY07 until FY2015. These costs are above and beyond the routine day to day maintenance of all system components.