River and Harbor Projects

on the

OHIO RIVER

Locks and Dams	River Mile	Built	Placed in Operation	Description	Cost of Construction
No. 1 Davis Island	4.7	1877-1885	Oct. 1885	Navigable pass, one lock 50′×158′	$870,034
Emsworth	6.2	1919-1922	Sep. 1921	Fixed crest; two locks: river, 56′×360′; land, 110′×600′ Original structure eliminated Davis Island L/D and L/D 2.	$5,861,765 (Includes reconstruction)
		1935-1938		Structure was rebuilt to provide a gated crest and to raise the pool. This permitted the elimination of L/D 1, Monongahela River, and L/D 1, Allegheny River.	
No. 2 (Glenfield, Pa.)	9.0	1898-1906	Oct. 1906	Navigable pass; one lock 110′×600′	$976,767
No. 3 (Osborne, Pa.)	10.9	1899-1907	Feb. 1908	Navigable pass; one lock 110′×600′	$1,144,588
Dashields	13.3	1927-1929	Aug. 1929	Fixed crest; two locks: river, 56′×360′; land, 110′×600′ Eliminated L/D 3	$8,531,478
No. 4 (Legionville, Pa.)	18.6	1898-1908	Feb. 1908	Navigable pass; one lock 100′×600′	$1,071,472
No. 5 (Freedom, Pa.)	24.1	1898-1907	Nov. 1907	Navigable pass; one lock 110′×600′	$1,080,132
No. 6 Merrill	29.3	1892-1904	Aug. 1904	Navigable pass; one lock 110′×600′	$1,123,442
Montgomery	31.7	1932-1936	Jun. 1936	Gated crest; two locks: river, 56′×360′; land, 110′×600′ Eliminated L/Ds 4, 5 and 6	$5,737,611
No. 7 (Midland, Pa.)	36.5	1910-1914	Sep. 1914	Navigable pass; one lock 110′×600′	$1,075,000
No. 8 (1.7 mi. below Newell, W.Va.)	46.4	1904-1911	Jul. 1911	Navigable pass; one lock 110′×600′ Transferred to Pittsburgh District, August 1910.	$1,167,456

Locks and Dams	River Mile	Built	Placed in Operation	Description	Cost of Construction
New Cumberland	54.4	1955-1963	Nov. 1959	Gated crest; two locks: river, 110′× 1,200′; land, 110′×600′ Eliminated L/Ds 7, 8 and 9	$39,099,688
No. 9	56.1	1910-1914	Nov. 1914	Navigable pass; one lock 110′×600′ Construction commenced by Pittsburgh District, November 1910.	$1,177,000
No. 10 (1.8 mi. above Steubenville, W.Va.)	66.2	1912-1916	Oct. 1915	Navigable pass; one lock 110′×600′ Construction commenced by Pittsburgh District, November 1912.	$1,138,000
No. 11 (2.5 mi. below Wellsburg, W.Va.)	76.9	1904-1911	Aug. 1911	Navigable pass; one lock 110′×600′ Transferred to Pittsburgh District, June 1922.	$1,162,165
Pike Island	84.3	1959-1965	Nov. 1916	Gated crest; two locks: river, 110′× 1,200′; land, 110′×600′ Eliminated L/Ds 10 and 11	$56,616,066
No. 12 (Warwood, W.Va.)	87.4	1911-1917	Jan. 1917	Navigable pass; one lock 110′×600′ Transferred to Pittsburgh District, June 1930.	$1,166,104
No. 13 (McMechen, W.Va.)	96.1	1901-1911	Aug. 1911	Navigable pass; one lock 110′×600′ Transferred to Pittsburgh District, June 1930.	$1,222,389
No. 14 (Woodland, W.Va.)	114.0	1911-1917	Aug. 1917	Navigable pass; one lock 110′×600′ Transferred to Pittsburgh District, July 1965.	$1,133,371
Hannibal	126.4	1966-1975	Jul. 1975	Gated crest; two locks: river, 110′× 1,200′; land, 110′×600′ Eliminated L/Ds 12, 13 and 14	$87,449,800

River and Harbor Projects
on the
MONONGAHELA RIVER

Locks and Dams	River Mile	Built	Placed in Operation	Description	Cost of Construction
No. 1 Mon. Nav. Co.	1.9	1838-1841 1848-1851 1909-1912	Oct. 1841	Fixed crest; one lock 50′×158′ Additional lock 56′×216′ New double locks (ea.) 56′×360′ Eliminated by reconstructed Emsworth Dam, Ohio River 1936-1938	$439,500[1]
No. 2 Corps of Engrs. (Braddock, Pa.)	11.2	1904-1905 1949-1953	Aug. 1905 Jul. 1951 Nov. 1953	Adjustable crest; two locks (ea.) 56′×360′ Locks and dam reconstructed; fixed crest, two locks River chamber, 56′×360′ Land chamber, 110′×720′ Eliminated L/D 2 Mon. Nav. Co.	$17,872,212[2]
No. 2 Mon. Nav. Co.	11.8	1838-1841 1848-1854	Oct. 1841	Fixed crest; one lock 50′×158′ Additional lock 56′×216′	$442,000[1]
No. 3 Corps of Engrs. (Elizabeth, Pa.)	23.8	1905-1907 1922-1924	May 1907	Adjustable crest; two locks (ea.) 56′×360′ Land chamber lengthened to 720′ Eliminated L/D 3 Mon. Nav. Co.	$1,681,538[2]
No. 3 Mon. Nav. Co.	25.0	1840-1844 1883-1884	Nov. 1844	Fixed crest; one lock 50′×158′ Additional lock 56′×277′	$454,000[1]
No. 4 Mon. Nav. Co. (N. Charleroi, Pa.)	40.9	1840-1844 1885-1886 1913-1916	Nov. 1844	Fixed crest; one lock 50′×158′ Additional lock 56′×227′ Two locks rebuilt (ea.) 56′×360′	$425,000[1]
No. 4 Corps of Engrs.	41.5	1931-1932 1964-1967	Aug. 1932 Jun. 1967	Fixed crest; two locks: land, 56′×720′; river, 56′×360′ Eliminated L/D 4, Mon. Nav. Co. Pool raised and gated crest provided; *See Maxwell*	$17,254,071[2]
No. 5 Corps of Engrs. (Brownsville, Pa.)	56.5	1907-1910	Dec. 1909	Fixed crest; two locks (ea.) 56′×360′ Eliminated L/D 5 Mon. Nav. Co.	$1,074,812[2]
No. 5 Mon. Nav. Co.	58.3	1854-1856	Nov. 1856	Fixed crest; one lock 50′×165.5′	$215,000[1]
Maxwell	61.2	1960-1965	May 1964	Movable crest; two locks (ea.) 84′×720′ Maxwell L/D along with reconstruction of L/D 4, which raised Pool 4, permitted elimination of L/D 5, as constructed by the Corps of Engineers, and L/D 6, as constructed by the Mon. Nav. Co.	$30,110,889[2]
No. 6 Mon. Nav. Co. (Rice's Landing, Pa.)	68.3	1854-1856 1914-1916	Nov. 1856	Fixed crest; one lock 50′×165′ Reconstructed with fixed crest, two locks (ea.) 56′×360′	$175,000[1] $770,449[2]
No. 7 Mon. Nav. Co. (Martin, Pa.)	82.3	1883-1884	1883	Fixed crest; one lock 50′×159′	$171,200[1]

Locks and Dams	River Mile	Built	Placed in Operation	Description	Cost of Construction
No. 7 Corps of Engrs.	85.0	1923-1926	Nov. 1925	Fixed crest; one lock 56′×360′ This lock and dam, along with L/D 8, also constructed in 1925, permitted elimination of Mon. Nav. Co. L/D 7 and Corps of Engineers L/D 9 (1879)	$2,639,804[2]
No. 8 Corps of Engrs. (Point Marion, Pa.)	87.1	1882-1889	Nov. 1889	Fixed crest; one lock 50′×161.6′	$245,900[2]
No. 8 Corps of Engrs.	90.8	1923-1926 1958-1959	Oct. 1925	Fixed crest; one lock 56′×360′ Dam raised; movable crest provided *See notes for L/D 7 Corps of Engrs.*	$5,408,495[3]
No. 9 Corps of Engrs. (Hoard, W.Va.)	92.4	1874-1879	Nov. 1879	Fixed crest; one lock 50′×160′	$191,000[2]
No. 10 Corps of Engrs. (Morgantown, W.Va.)	101.5	1897-1903	Dec. 1903	Fixed crest; one lock 56′×182′	$210,445[2]
Morgantown	102.0	1948-1950	Jul. 1950	Movable crest; one lock 84′×600′ Eliminated L/D 10 and 11	$8,778,000[2]
No. 11 Corps of Engrs. (Uffington, W.Va.)	104.1	1901-1903	Dec. 1903	Fixed crest; one lock 56′×182′	$227,668[2]
Hildebrand	108.0	1956-1960	Jun. 1959	Movable crest; one lock 84′×600′ Eliminated L/D 12 and 13	$12,506,829[2]
No. 12 Corps of Engrs.	109.1	1901-1903	Dec. 1903	Fixed crest; one lock 56′×182′	$200,550[2]
No. 13 Corps of Engrs.	111.6	1901-1903	Jan. 1904	Fixed crest; one lock 56′×182′	$190,691[2]
No. 14 Corps of Engrs.	115.0	1901-1903	Dec. 1903	Fixed crest; one lock 56′×182′	$210,127[2]
Opekiska	115.4	1961-1967	Aug. 1964	Movable crest; one lock 84′×600′ Eliminated L/D 14 and 15	$25,179,622[2]
No. 15 Corps of Engrs.	124.2	1901-1903	Dec. 1903	Fixed crest; one lock 56′×182′	$175,829[2]

[1] Construction costs were prepared by T. P. Roberts, who was at that time Chief Engineer of the Monongahela Navigation Company. His report was dated December 29,, 1886. The estimates include the costs of the original construction, real estate, and additional locks where appropriate, but not the repair of breaches in Dams 1, 2, and 3.

[2] Construction costs reported in the 1977 Annual Report of the Chief of Engineers:
Cost for Locks and Dam 2 includes $16,967,114 for reconstruction of locks,
Cost for Locks and Dam 3 includes cost of extending land chamber,
Cost for Locks and Dam 4 includes $15,080,304 for reconstruction of dam,
Cost for Locks and Dam 6 includes the reconstruction of both locks and dam.

[3] Construction cost as reported in "Project Maps and Data Sheets:"
Original construction (1923-1926) $2,086,438,
Reconstruction (1958-1959) $3,322,057.

River and Harbor Projects
on the
ALLEGHENY RIVER

Locks and Dams	River Mile	Built	Placed in Operation	Description	Cost of Construction
No. 1 Herr's Island	1.7	1893-1903	Dec. 1902	Movable dam; one lock 55′×286′	$591,187
Six Mile Island	6	1879		Low earth dam, 700′ long	(1)
No. 2 Existing (Aspinwall, Pa.)	6.7	1932-1934	Oct. 1934	Fixed crest; one lock 56′×360′ Replaced original L/D 2	$1,763,485
No. 2 Original	7.0	1902-1908	Nov. 1906	Fixed crest; one lock 56′×289′	$544,929
No. 3 Existing (Cheswick, Pa.)	14.5	1932-1934	Oct. 1934	Fixed crest; one lock 56′×360′ Replaced original L/D 3	$1,875,665
No. 3 Original (Springdale, Pa.)	17.0	1897-1904	Nov. 1904	Fixed crest; one lock 56′×289′	$310,103
No. 4 (Natrona, Pa.)	24.2	1920-1927	Sep. 1927	Fixed crest; one lock 56′×360′	$1,707,690
No. 5 (Freeport, Pa.)	30.4	1920-1927	Oct. 1927	Fixed crest; one lock 56′×360′	$1,940,537
No. 6 (Clinton, Pa.)	36.3	1927-1928	Oct. 1928	Fixed crest; one lock 56′×360′	$1,523,959
Nicholson's Island	37	1880		Low earth dam, 1,000′ long	(1)
No. 7 (Kittanning, Pa.)	45.7	1928-1931	Nov. 1930	Fixed crest; one lock 56′×360′	$1,460,008
Cowanshannock, Pa.	47-47.4 48	1893-1895 1893		Two spurdikes, 510′ and 525′ long Low earth dam, 402′ long	(1) (1)
No. 8 (Templeton, Pa.)	52.6	1929-1931	May 1931	Fixed crest; one lock 56′×360′	$2,848,920
No. 9 (Rimerton, Pa.)	62.2	1935-1938	Oct. 1938	Fixed crest; one lock 56′×360′	$2,510,373
Red Bank Creek	64.0	1889		Dike, 1,739′ long	(1)
Pithole	143	1891		Low earth dam, 1,132′ long	(1)
Tionesta	152	1893		Low earth dam, 298′ long	(1)
Hickory	157	1891		Low earth dam, 730′ long	(1)
Cornplanter	204	1890		Low earth dam, 334′ long	(1)
Corydon	209	1887		Log chute, 370′ long	(1)

(1) From the Report of the Chief of Engineers for fiscal year ending June 30, 1897. The estimated total cost of improvements up to that date was $218,000.