

## Appendix D Data for Existing Tainter Gates

Spillway tainter gates of various types and sizes have been used on more than 150 USACE projects. New gates that are designed likely have similar characteristics to some that have been designed in the past. Past designs should be utilized as much as possible to avoid duplication of effort. The following table includes a listing of selected existing projects that include tainter gates. Table D-1 provides basic information including gate height (H), gate width (W), gate radius (R), gate design head (DH), gate weight (WT), and miscellaneous information. A more complete listing is provided by Cox (1972). Figures D-1 and D-2 show details of flood control and navigation projects, respectively.

**Table D-1  
Data for Existing Tainter Gates**

Project	H m (ft)	W m (ft)	R m (ft)	Year	DH m (ft)	WT KN (kips)	Miscellaneous
Holt Lock and Dam Black Warrior River Mobile District	10.7 (35)	12.2 (40)	13.7 (45)	1966	10.7(35)	663 (148)	Navigation Project Inclined end frames Steel trunnion girders
Dear Creak Lake Huntington District	10.7 (35)	12.8 (42)	9.4 (31)	1968	11.9 (39)	394 (88)	Flood Control Project Inclined end frames
Carters Project Coosawattee River Mobile District	11 (36)	12.8 (42)	11.6 (38)	1973	8.5 (28)	659 (147)	Parallel end frames
Pine Flat Dam Kings River Sacramento District	11.6 (38)	12.8 (42)	11.9 (39)	1953	11.6 (38)	520 (116)	Flood Control Project Inclined end frames Chain hoist system
John W. Flannagan Lake Huntington District	11.6 (38)	12.8 (42)	11.6 (38)	1967	11 (36)	565 (126)	Flood Control Project Inclined end frames
Lock and Dam 5 Mississippi River St. Paul District	4.6 (15)	10.7 (35)	7.6 (25)	1935	4.6 (15)	233 (52)	Navigation Project Parallel end frames
Lock and Dam 26 Mississippi River St. Louis District	12.8 (42)	33.5 (110)	16.5 (54)	1992	12.8 (42)	4,384 (978)	Navigation Project Parallel end frames
Lake Shelbyville Kaskaskia River St. Louis District	11.3 (37)	13.7 (45)	10.7 (35)	1970	11.3 (37)	515 (115)	Flood Control Project Inclined end frames
Kaskaskia River Navigation St. Louis District	9.2 (30)	18.3 (60)	13.7 (45)	1973	9.2 (30)	1,031 (230)	Navigation Project Parallel end frames
Hartwell Dam Savannah River Savannah District	11 (36)	12.2 (40)	12.2 (40)	1963	10.7 (35)	489 (109)	Flood Control Project
Dwarshak Dam Northfork Clearwater River Walla Walla District	17 (56)	15.2 (50)	16.8 (55)	1971	17 (56)	1,255 (280)	Flood Control Project Inclined end frames

Note: All gates have wire rope hoist systems except as noted.

(Continued)

Table D-1 (Concluded)

Project	H m (ft)	W m (ft)	R m (ft)	Year	DH m (ft)	WT KN (kips)	Miscellaneous
Lower Granite Lock and Dam Snake River Walla Walla District	18.3 (60)	15.2 (50)	18.3 (60)	1975	18.3 (60)	1,345 (300)	Flood Control Project Inclined end frames
Willow Island Lock and Dam Ohio River Huntington District	8.5 (28)	33.5 (110)	14.9 (49)	1976	7.9 (26)	2,600 (580)	Navigation Project Parallel end frames
Racine Lock and Dam Ohio River Huntington District	10.3 (34)	33.5 (110)	17.4 (57)	1971	10.3 (34)	3,138 (700)	Navigation Project Stressed skin type fabrication
Old River Auxiliary Control Structure Mississippi River New Orleans District	22.9 (75)	18.9 (62)	21.6 (71)	1981	55	3,810 (850)	Framed with vertical end girders and seven horizontal girders
Winfield Lock and Dam Huntington District	8.5 (28)	33.5 (110)	14.6 (48)	1997	7.9 (26)	2,564 (572)	Navigation Project Parallel end frames Hydraulic hoist system

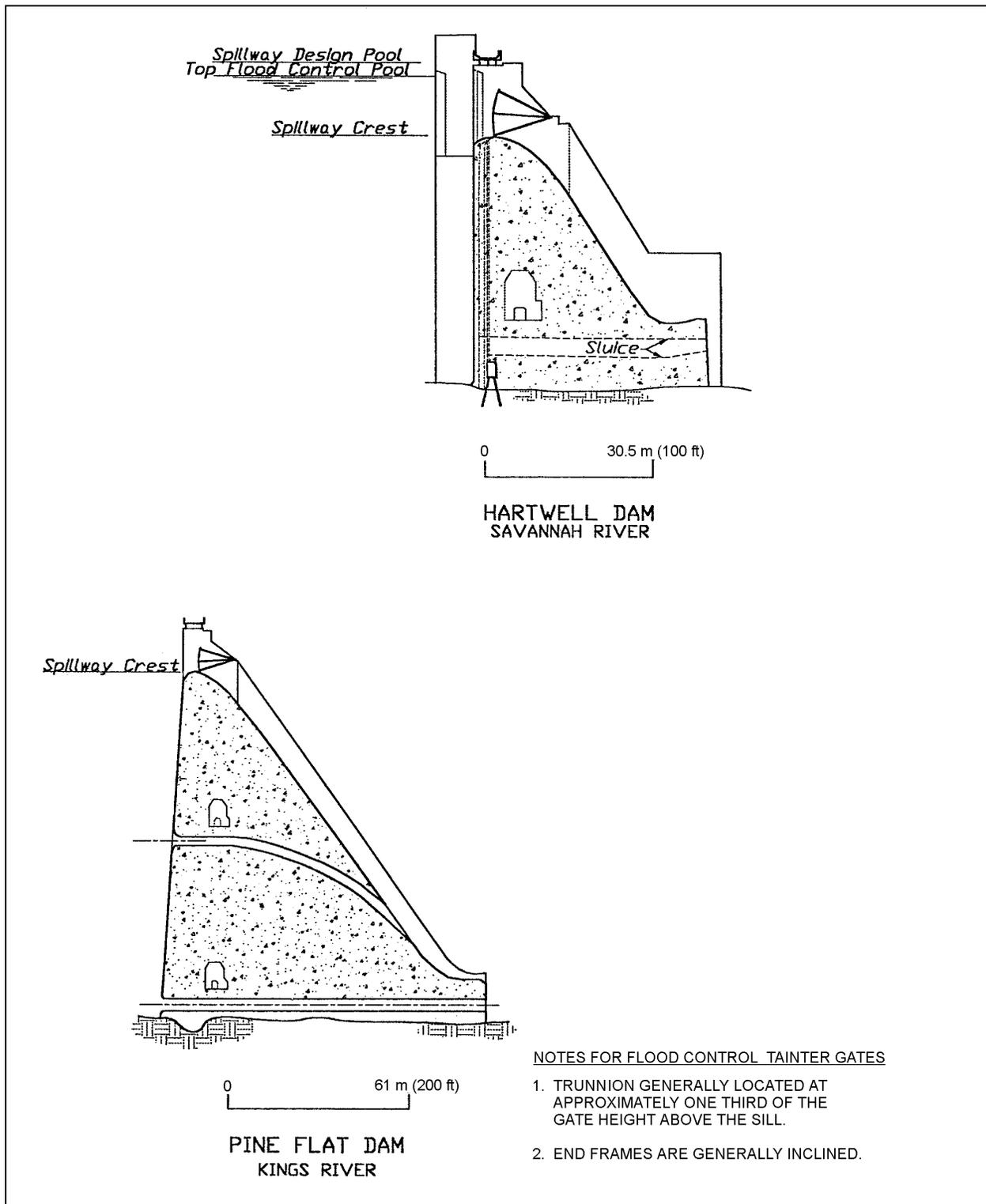


Figure D-1. Typical flood control projects

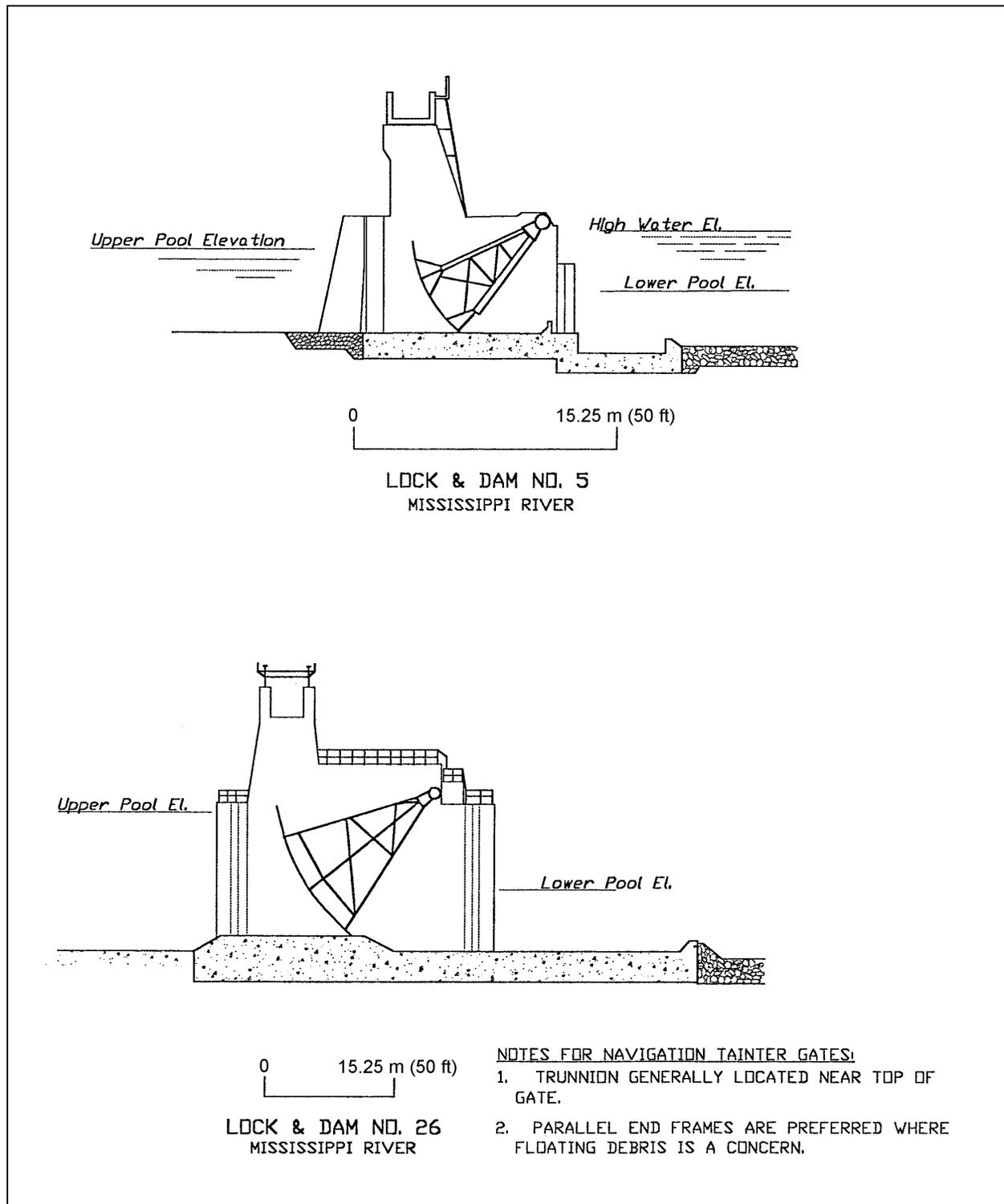


Figure D-2. Typical navigation projects