



US Army Corps
of Engineers

Water Resources
Support Center
Navigation Data Center

Lock Performance Monitoring System

Summary of Lock Statistics for 1998

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Lock Performance Monitoring System

Summary of Lock Statistics



**Navigation
Data
Center**

U.S. Army Corps of Engineers
Water Resources Support Center
7701 Telegraph Rd., Casey Bldg.
Alexandria, Virginia 22315-3868

Preface

The Summary of Lock Statistics is a product of the Navigation Data Center, Water Resource Support Center, U.S. Army Corps of Engineers in Alexandria, VA. The information is compiled from statistics collected at Corps locks in support of the Lock Performance Monitoring System (LPMS).

The information is produced on a cumulative quarterly basis and can be viewed and printed from the NDC Web Site at <http://www.wrsc.usace.army.mil/ndc>. The end of year publication for the last complete calendar year is distributed on the NDC Publications and U.S. Waterway Data CD. Requests to update or change the distribution, comments and questions can be directed to David Lichy (telephone:703 428-9052, Email:david.e.lichy@usace.army.mil).



ARLENE L. DIETZ
Director, Navigation Data Center

LPMS Summary of Lock Statistics

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Introduction

The Lock Performance Monitoring System (LPMS) encompasses the collection, editing, maintenance and analysis of data assembled at all Corps-owned and operated locks. The data have been collected since March 1975 and consist of information describing the traffic through the locks as well as the physical aspects of lockages. The Summary of Lock Statistics provides an overview of the traffic and operation at each lock. Information is presented in three sections:

1) *Lock Characteristics General Report*, section 1 lists information about the physical characteristics of each lock chamber organized by river name and river mile for each lock. 2) *LPMS Summary by River Basin* for; section 2 lists current year summary statistics organized by river name and the river mile for each lock and, 3) *LPMS Summary by Division/District*, section 3 lists comparisons of current and previous year summary statistics by direction and total organized by division/district, river name and the river mile for each lock.

In 1995, Section 2 was revised to include lock closure information. In addition, Section 3 was revised to list the actual frequency of the different types of vessels, barges, bottoms, and lockages. In 1998 revisions were made to the definitions and computation of total lockages and the subcategory commercial lockages and commercial vessels (see definition of terms).

Definition of Terms

Definitions of terms are listed as they appear in *Section 2 - LPMS Summary by River Basin* and *Section 3 - LPMS Summary by Division/District*.

Vessels Total: The total number of vessels which have passed through a lock chamber. Total vessels is the sum of all vessels as defined in the LPMS data collection form (ENG Form 3102b, Jan 91): tows, passenger boats/ferries, recreational vessels, cargo carrying vessels, U.S. Govt. vessels, U.S. Govt. contractor, commercial fishing boats, other, and light (towboat w/o barges). Barges are counted separately, see below. *See Sections 2 & 3.*

Vessels Rec.: The total number of recreational vessels which have passed through a lock chamber. *See Section 3.*

Vessels Comrcl: The total number of commercial vessels (defined as tows, cargo, passenger, fishing, or lightboat) which have passed through a lock chamber. *See Section 3.* [revised 1998]

Vessels Other: The total number of other vessels which have passed through a lock chamber. Vessels counted in this column include all other vessel types described above EXCEPT recreational and tows. *See Section 3.*

Barges Total: The total number of barges (loaded and empty) which have passed through the lock. *See Section 3.*

Barges Loaded: The total number of loaded barges which contained commodities and/or has cargo. *See Section 3.*

Barges Empty: The total number of empty barges which have passed through a lock chamber. *See Section 3.*

Bottoms Total: The combined total number of vessels and barges which have passed through a lock chamber (a bottom is the hull of a vessel or barge transiting the lock). *See Section 3.*

Tonnage Ktons: The combined total tonnage from all loaded barges which passed through the lock chamber. Tonnage is reported in ktons. (1 ton is equal to 2000 lbs.) *See Sections 2 & 3.*

Lockages Total: The total number of all lockages at a lock chamber. A lockage is the same as a cut. A lockage is the transfer of a vessel(s), or that part of the tow which can be contained in the lock chamber, through a chamber in a single

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direction. *See Sections 2 & 3.* [revised 1998]

Lockages Rec.: The total number of recreation lockages. A recreation lockage is counted each time a recreational vessel or group of recreational vessels uses the lock chamber at the same time. *See Section 3.*

Lockages Comrcl.: The total number of commercial vessels. A commercial vessel includes tows, cargo carrying vessels, commercial fishing boats, lightboats (tows without barges) and commercial passenger vessels/ferries using the lock chamber. *See Section 3.* [revised 1998]

Lockages Other: The total number of "other" lockages. Other lockages are counted when the following vessels or group of vessels use the lock chamber at the same time and include U.S. government vessels, U.S. government contractor, and vessels classified as "other" non-commercial. *See Section 3.* [revised 1998]

Hardware Operations: Number of cuts plus turnback operation of lock chamber. Calculated to count each emptying or filling of lock chamber.

Number Delayed Tows: The total number of tows which experience a delay (i.e. wait time greater than zero minutes) between the arrival point and start of lockage. *See Section 3.*

Tows All - The total number of tows with their barges passing through a lock chamber. [revised 1998]

Tows Delayed - The total number of *delayed* tows with their barges passing through a lock chamber. If there is significant delay between the arrival time and the start of lockage the tow is considered delayed. [revised 1998]

Average Delay - All Tows: The average delay time, expressed in hours, for all tows which passed through a lock chamber. *See Section 3.*

Average Delay - Delayed Tows: The average delay time, expressed in hours, calculated only for tows waiting to pass through a lock chamber. *See Sections 2 & 3.*

Average Delay - Delayed Vessels: The average delay time, expressed in hours, calculated only for vessels waiting to pass through a lock chamber. *See Section 3.*

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Total Delay Time Tows: The total hours of accumulated delay time experienced by tows waiting to pass through a lock chamber. *See Section 3.*

Percent Delayed - Vessels: The percentage of all vessels delayed before passing through a lock chamber. *See Section 2.*

Percent Delayed - Tows: The percentage of all tows delayed before passing through a lock chamber. *See Section 2.*

Lock Closures - Avg Time: The average time a lock chamber was closed or unavailable. This average time is expressed in hours and is based on the total lock closure time (i.e. unavailable time) divided by the total number of closures. *See Section 2.*

Lock Closures - Freq. Total: The total number of lock closures where the lock was unavailable for navigation. *See Section 2.*