

COMPLETION REPORT  
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EFFECT OF DIVERTING MISSISSIPPI RIVER WATER  
TO TEXAS ON SEDIMENTATION IN THE RIVER

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for

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### *Summary*

The proposed diversion of water from the lower Mississippi River to Texas and eastern New Mexico will affect the discharge and sedimentation characteristics of the River. An empirical relationship between discharge, depth, and flow velocity was determined by regression analysis in the form of a non-linear mathematical model. By use of this model the daily flow velocity and water depth at Coochie, Tarbert's Landing, Red River above Old River, and Simmesport were obtained and tabulated.

An attempt has been made to estimate the parameters of a non-linear system relating the sediment concentration to the velocity, depth, energy slope, and settling velocity at these four stations. Although there was a mathematical relationship, it is impractical. However, it seems certain that a decline in flow discharge results in a decline of sediment concentration.

While it is possible to forecast with some certainty the total discharge in the River, it is impossible to predict any other changes that would occur should the discharges of water, sediment sizes, flow velocities, bed, channel and bank resistance be changed.

## *Background*

In northern Minnesota lies Lake Itasca, where the 10-ft wide Mississippi River begins. It flows northward toward Bemidji over rapids and through water grass and reeds, and then streams eastward. The Mesabi Range rainwater joins the Mississippi River and commits it to southward trenching (Fig. 1). It meanders through a winding course of 500 miles before it becomes navigable. The river is a quarter-mile in width and augmented by many small tributaries; it cascades 65 feet over rocks and boulders for three-quarters of a mile, creating St. Anthony's Falls, which is 1,970 miles from the mouth of the Mississippi.

At St. Paul, the Minnesota River pours its water from the west into the Mississippi and, farther down, the St. Croix does the same from the east. The Missouri River emerges above St. Louis after traveling twice as far as the Mississippi and with its burly, muddy water it changes the characteristics of the Mississippi. The two different streams bicker along together for miles before uniting. Thirty miles below St. Louis, the river arrives at what was once its end, for here begins one of the greatest alluvial valleys of the world.

A continent once ended where the lower Mississippi begins. Fifty thousand years ago a great inland sea covered what are now the prairies of Illinois, Indiana, Missouri and Iowa--a sea that was level with and linked to Lake Michigan (Carter, 1942, p. 3).

The segment between the Missouri and Ohio Rivers is sometimes called the Middle River. This segment is far different from the upper part of the Mississippi River because of its turbulence (Carter, 1962, p. 5). The Ohio River emerges, joins and contributes more water than does the Missouri.

The course which the Mississippi takes from Cairo to its ever-extending mouth is called the lower Mississippi. The river continues between its banks through the Delta as a well-defined channel, until it reaches what is known as the Passes. There, it divides into three distinct channels, known respectively as the South, Southeast, and Southwest; the middle or South Pass is the navigable channel, which has been deepened and kept open by the construction of jetties at its mouth and by dikes throughout its length and at its entrance.

While there are many dams on the Mississippi River, they do not interrupt the flow of sediment as do those of many other large rivers. Deposits of sediment have pushed the delta farther and farther south, laid down a mud plain 20-80 miles wide and lengthened the river by some thousand miles (Price, 1970, p. 16). The sediment carried by the rivers became in time the banks of a doomed estuary and the uncertain earth of an encroaching valley, the estuary retreating as the lengthening river pushed and built southward for more than 1,200 miles.

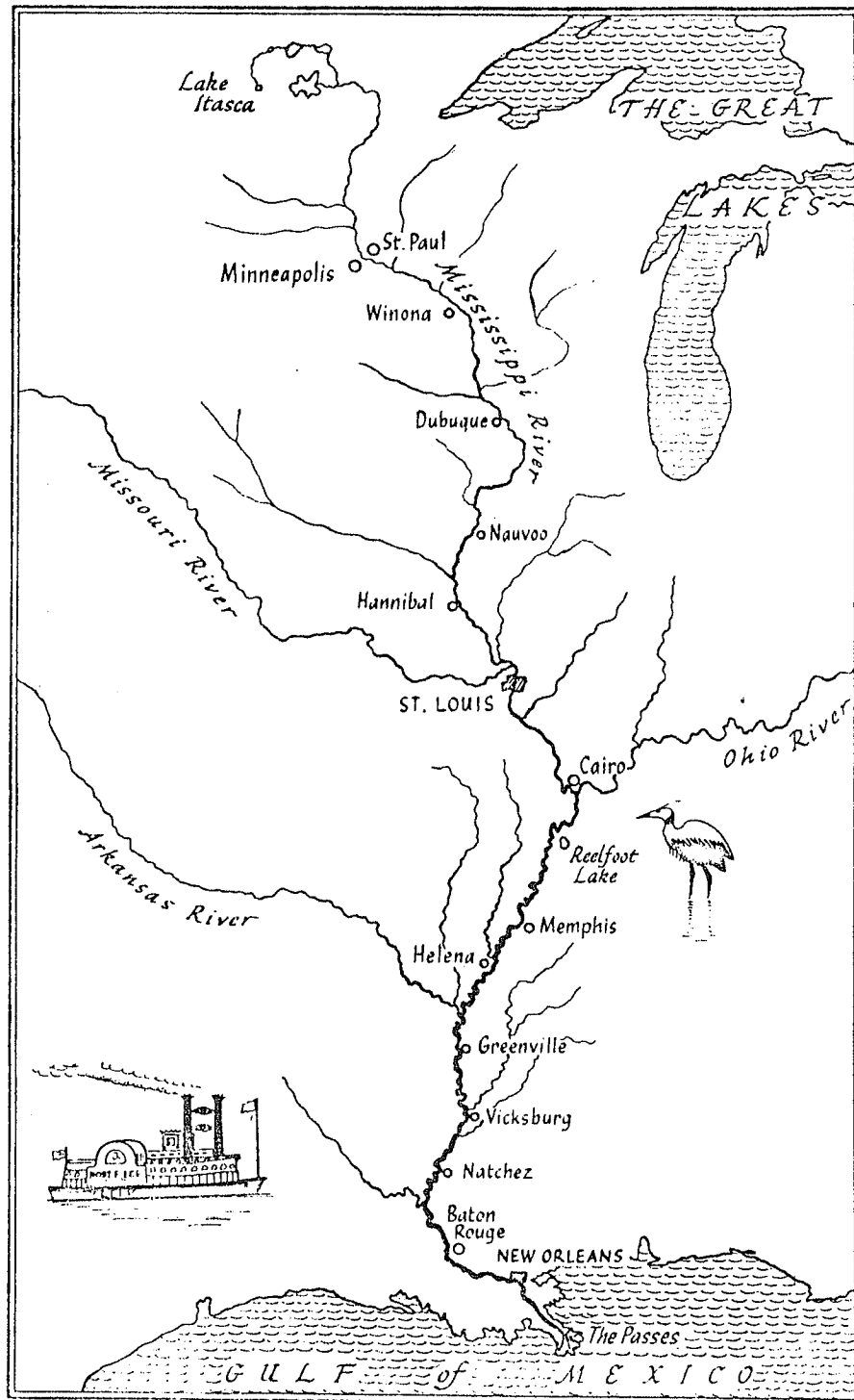


Figure 1. Mississippi River and Its Major Tributaries (from Price, Willard, 1962, The Amazing Mississippi)

## *Impact of the River*

Discovered by DeSoto in 1541, America's greatest river made major contributions to the physical and economic growth of the nation. It is one of the nation's outstanding assets (Mississippi River Commission, 1967, p. 3).

The Mississippi River is of vast economic importance to the nation. It is the source of huge daily flow, averaging 600,000 cfs, suitable for irrigation, industrial and municipal uses. It is navigable by vessel up to Baton Rouge, and by barge for nearly the entire length of the river.

Eighty miles above Baton Rouge, the Old River is a 7-mile stream connecting the Mississippi with the Red River and the Atchafalaya. The direction of flow in Old River varied, depending upon whether the Mississippi was high and the Red River low, in which case flow was to the Atchafalaya. When the Red River was high and the Mississippi low, flow was to the Mississippi. As the flow in the Mississippi is high and the flow in the Red River low more often than not, the Atchafalaya River began enlarging itself through the capture of increasingly greater amounts of the Mississippi's flow.

Changing conditions of the lower Mississippi River have been under observation by the Corps of Engineers, U.S. Army, for the last 50 years. In 1950 a major definitive study was begun to determine the threat of the Mississippi River changing its course to flow through the Atchafalaya River.

At the same time a huge industrial complex was created, particularly in the area along the Mississippi from Baton Rouge to New Orleans, because of the ample supply of fresh water and a dependable navigation system. In addition, industrial demands for Mississippi River water increased. Had the Atchafalaya captured the Mississippi, a disaster of catastrophic proportions would have occurred. The existing industrial complex would have been destroyed, resulting in economic demise for the area in the future. The findings left no doubt that the Atchafalaya River would become the main channel of the Mississippi River below Old River. The flow in the Mississippi River would decrease and sediment channel would be unavoidable. Navigation would be impossible. The Mississippi River below Old River would become a salt-water estuary.

After studying all possible solutions, the Mississippi River Commission recommended that the uncontrolled link with Old River be dammed and replaced with a controlled connection that would make it possible to divert the optimum amounts of water into the Atchafalaya Basin. Low-sill and overbank structures were built to pass medium flows and flood flows from the Mississippi to the Atchafalaya River in a controlled manner. Inflow and outflow channels were constructed connecting the low-sill structure with the Mississippi and Red-Atchafalaya Rivers (Fig. 2) (Mississippi River Commission, 1967, p. 16).

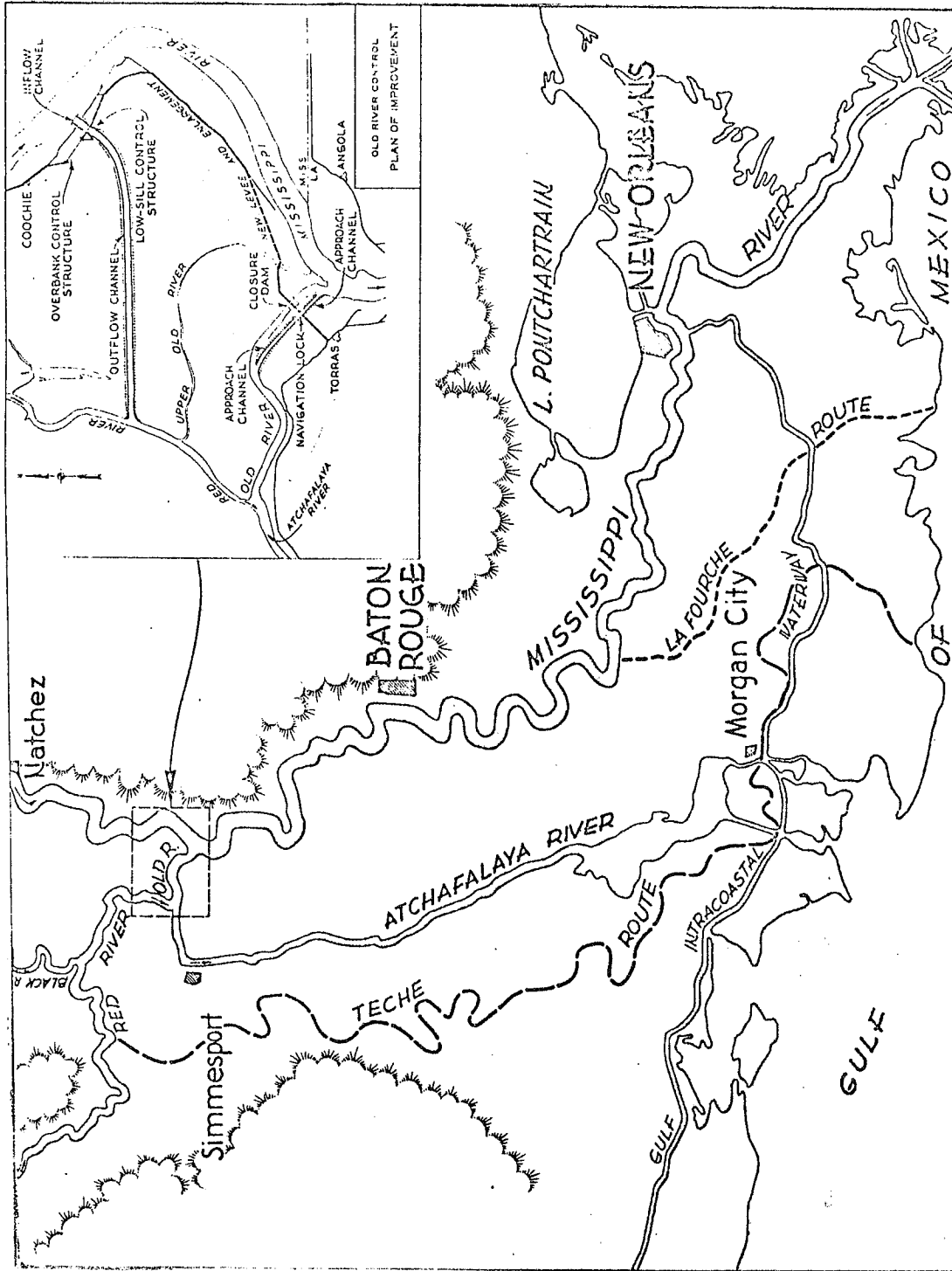


Figure 2. Old River Improvement Plan  
 (from Mississippi River Commission, 1967, p. 16)



## General

In a description of the flow of the Mississippi River, many factors affect the channel characteristics directly or indirectly. The most important are the river discharge, slope, temperature, <sup>and the</sup> nature and amount of sediment load. The interrelation between these factors is very complex. Though the river discharge is the most obvious factor in determining the stream form, the discharge depends on the resistance of the banks and bed slope to the flow movement. Velocity is the most representative parameter in the transport of suspended sediment; depth is probably the next most important variable. Temperature and boundary geology no doubt represent other factors to be seriously considered.

Sediment transported by the Mississippi River moves as suspended material <sup>or</sup> along the bottom as bed load. An average sediment load of about 300 million tons a year is carried by the river and is ultimately deposited in the river delta or the Gulf of Mexico.

The amount of suspended material carried by the river is dependent upon streamflow, water turbulence, sediment particle size, and water temperature. Generally, concentrations of sediment increase as discharge increases; however, the concentration of sediment depends on whether the discharge is increasing or decreasing. On a rising stage, concentration of sediment is greater than at a corresponding discharge on a falling stage. Peak sediment concentrations in the Mississippi River usually occur before peak discharge. During the initial increase in flow the concentration of sediment increases rapidly, and as long as the supply of sediment particles of a size that the river is capable of transporting is sufficient to meet the carrying capacity of the river, the concentration will continue to rise at a rapid rate. However, because the supply is generally less than the river can transport, the concentration of sediment will decrease as the flow continues to increase and will continue to decrease as the discharge decreases.

Though there were enough data on the discharge in the Mississippi River and how much should or should not be diverted, an almost complete silence prevailed about the river-water quality in general and the sedimentation in particular. With huge amounts of sediment carried by flow every year, it is expected that any change in flow characteristics will undoubtedly change the sediment load. The main objective of this research was to develop a mathematical model of sedimentation in the Mississippi River. In addition, a prediction of what might happen to the water characteristics and the river regime under the proposed plan of diversion was to have been made.

## Purpose of the Research

In 1967 Congress passed a resolution requesting that the Secretary of the Army, acting through the Chief of Engineers and the Mississippi River Commission, participate with concerned Federal, state and local agencies in studies to determine the advisability of improvements for exporting any surplus water in the Mississippi River system to water-deficient areas (Texas Water Development Board, 1968, p. 1).

The State of Texas, through the Texas Water Development Board, has made extensive studies for the purpose of formulating a state-wide plan. The Board published a proposed plan, recognizing that the need for import of major water supplies to the western part of Texas is the state's most urgent immediate need. The Board also concluded that it is physically feasible to transport a projected 16.5 million acre-ft per year from the Mississippi River system by the year 2020 (Texas Water Development Board, 1968, p. 2).

### *The Problem*

The proposed diversion of the lower Mississippi River to Texas and eastern New Mexico would no doubt affect the discharge and sedimentation characteristics of the river. However, these effects depend upon many variables such as time of year, diversion point, and how the diversion will take place. Although there has not yet been a final choice of diversion point, it has been suggested that the Old River Control Structure is one of nine possibilities to be considered (U.S. Bureau of Reclamation, 1968, pp. 64-69).

In an attempt to study what would have happened to the flow pattern if man-made diversion or interference with the river occurred, four sites were selected: two on the main channels, Coochie upstream of the control structure, and Tarbert's Landing south of it. Two other stations have been chosen, one on the Red River above Old River outflow channel, and the second one on the Atchafalaya River at Simmesport south of the outflow channel.

### *Mathematical Model*

#### *Introduction*

The previous investigators <sup>reference</sup> carried out carefully designed studies of sedimentation in different locations. They selected what they considered the most significant parameters and derived a mathematical relationship between flow and the sediment transport rate. Because each of these relationships was closely tied to the locality of the study and was of limited applicability, none of these relationships has been universally accepted.

The sediment transport phenomenon is such a complex matter that no single parameter can adequately describe the flow condition for the prediction of sediment transport rate. This problem is further complicated by the fact that the sediment entering any natural river reach is never uniform in size, shape, and specific gravity but always represents a rather complex mixture of different grain types.

Sediment particles are transported by flow in one or a combination of the following ways: 1) rolling or sliding on the bed as surface creep; 2) leaping into the flow and then resting on the bed as saltation; 3) suspended and supported by surrounding fluid during its entire motion (Shen, 1970, p. 11-1).

Sediment which moves as surface creep or saltation, and is supported by the bed, is called bed load. Sediments which are suspended and supported by flow are called suspended load. In many streams, a major part of the sediment transported by the flow is suspended in the

flow by turbulent eddies or by colloidal suspension.

Sediment load transported by a stream is a function of availability of material and capability of the stream to transport it. Silt and clay material carried in suspension is almost entirely a function of supply, since the stream has relatively great ability in transporting such material. Generally, the amount and characteristics of sediment particles such as shape, size, specific gravity, and cohesiveness play an important part in the sediment deposition.

### *The Data*

The analysis in this report is based on published reports of the Corps of Engineers. These reports contain the result of stage and discharge observations at Coochie, Tarbert's Landing, Red River above Old River, and Simmesport. Gages operated by the Corps of Engineers are generally inspected at least once each year. The discharge is expressed in cubic feet per second (cfs) and reported with a brief description of the gaging station. Observations of factors affecting the stage-discharge relation or the stage capacity relation were used to supplement base data in determining the daily flow or volume of water in storage. Samples of sediments were collected according to schedule or whenever the need arose. When no samples were collected, daily loads of sediment were estimated by interpolation on the basis of water discharge and sediment concentrations observed immediately before and after the periods, and sediment loads for other periods of similar discharge. In addition, the particle sizes of sediments are included. The water temperature is based on the U.S. Geological Survey publications. Daily water temperatures were measured at most of the stations at the time samples were collected for chemical quality analysis or sediment content. The recorded daily temperature stations are not the same ones as in the Corps of Engineer publications. However, St. Francisville and Baton Rouge are considered to be reasonably representative for the four stations. The settling velocity values for different sediment particles at different temperatures are those presented by Toffaleti [1968, p. 7].

### *Data Analysis*

The main goal of a sediment transport equation is to describe the sediment concentration for different flow conditions. The primary independent variables selected are: the flow velocity  $V$ , the fall velocity of the median sediment size of sediment  $\omega$ , the energy slope  $E$ , and the flow depth  $d$ . The dependent variable is the sediment concentration.

The recorded data, Table 1, show that though the discharge, sedimentation concentration and sedimentation load are available, the daily flow velocity and flow depth were not recorded.

The number of observations published by the U.S. Corps of Engineers from 1962 through 1972 for the Stations Coochie, Tarbert's Landing, Red River above Old River, and Simmesport are shown in Table 1.

The flow velocity is an important independent variable to consider in this study. The daily discharge data are available, and since the velocity for this discharge has not been reported, the first task was to compute the daily velocity.

Table 1.--The Number of Observations Available for the Four Stations  
Used in this Study

	Y e a r															
	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
<u>Coochie</u>																
Discharge (ft <sup>3</sup> /sec)								18	24	20	16	17	26	15	14	
Velocity (ft/sec)								11	21	20	15	15	26	19	0	
Depth (ft)								14	21	20	13	15	26	0	0	
Temperature (°F)								18	24	20	16	17	26	15	14	
<u>Tarbert's Landing</u>																
Discharge (ft <sup>3</sup> /sec)							x	x	x	x	x	x	x	x	58	15
Velocity (ft/sec)							98	95	18	86	77	74	27	25	58	0
Depth (ft)							0	0	0	0	0	0	27	25	0	0
Temperature (°F)							0	0	0	0	0	0	28	25	0	15
<u>Red River</u>																
Discharge (ft <sup>3</sup> /sec)																
Velocity (ft/sec)							x	30	29	34	20	22	23	20	19	18
Depth (ft)							1	30	28	34	20	22	23	20	20	0
Temperature (°F)							0	0	23	34	19	20	23	20	0	0
<u>Simmesport</u>																
Discharge (ft <sup>3</sup> /sec)																
Velocity (ft/sec)							xx	x	x	x	x	x	x	x	xx	19
Depth (ft)							91	61	89	85	77	6	28	24	64	
Temperature (°F)							0	0	0	0	0	6	28	24	24	19
							0	83	0	0	0	6	28	24	22	19

x = Daily records are available all year.

xx = Daily records are available from October through December.

## Velocity and Discharge Profile

Perhaps one of the most promising approaches to obtaining the daily flow velocity is to assume a mathematical relationship between discharge  $Q$  and flow velocity in the form of

$$Q = \alpha V^\beta \text{ ----- (1)}$$

where:

- $Q$  is the discharge in cubic feet per second
- $V$  is the flow velocity in feet per second
- $\beta$  is the flow velocity power, indicating the flow turbulence
- $\alpha$  is a constant
- $e$  is a base logarithm = 2.718 and called a natural logarithm.

All the reported observed data on a yearly basis for discharge and flow velocity have been collected. By regression analysis technique,  $\alpha$  and  $\beta$  can be determined, and a general mathematical equation for every year, and each zone, can be formulated. By substituting the available discharge data in the formulated equation, the daily flow velocity can be found.

The analyses of the velocity-discharge relationship for the four zones are as follows:

*Coochie*.--The analysis period started in 1965 and continues through 1971. It is noted that the flow velocity power  $\beta$  ranges from 1.23 to 1.44. This small difference in a large river such as the Mississippi River indicates only minor change in flow velocity over the past decade. For practical purposes, the flow velocity has been almost unchanged. But this is not to say the discharge has been constant.

The equations representing the flow velocity-discharge with its goodness factor are as shown in Table 2.

Table 2.--Relation of Discharge and Velocity  
at Coochie, Louisiana, 1963-1971

Year	Equation	Goodness Factor
1963	$Q = e^{11.0} v^{1.30}$	.993
1964	$Q = e^{10.98} v^{1.33}$	.978
1965	$Q = e^{10.81} v^{1.44}$	.988
1966	$Q = e^{10.90} v^{1.37}$	.935
1967	$Q = e^{10.82} v^{1.42}$	.995
1968	$Q = e^{11.20} v^{1.23}$	.982
1969	$Q = e^{11.20} v^{1.28}$	.935
1970	$Q = e^{11.27} v^{1.24}$	.982
1971	$Q = e^{11.09} v^{1.36}$	.993

*Tarbert's Landing.*--Through the analysis period, i.e., 1962 through 1971, it is noted that the velocity flow power  $\beta$  increased by about 40-50 percent when comparing it with that of Coochie. It is also noted that  $\beta$  was never less than 2 from 1965 on, and in 1969 it reached 2.84, an indication of turbulent flow. The year 1965 is rejected because of its low goodness factor, which can be attributed to poor quality of the reported data.

The equations representing the discharge-flow velocity with its goodness factors are shown in Table 3.

Table 3.--Relation of Discharge and Velocity at Tarbert's Landing, Louisiana, 1962-1971

Year	Equation	Goodness Factor
1962	$Q = e^{9.88} v^{2.28}$	.972
1963	$Q = e^{10.86} v^{1.61}$	.803
1964	$Q = e^{10.56} v^{1.96}$	.851
1965	$Q = e^{10.33} v^{1.98}$	.635
1966	$Q = e^{9.38} v^{2.63}$	.967
1967	$Q = e^{9.66} v^{2.25}$	.929
1968	$Q = e^{9.25} v^{2.63}$	.962
1969	$Q = e^{8.98} v^{2.84}$	.960
1970	$Q = e^{9.36} v^{2.61}$	.958
1971	$Q = e^{9.86} v^{2.30}$	.968

*Red River above Old River.*--With no available data for 1962 and only one recorded datum in 1963, it is noted that  $\beta$  is very much the same through the analysis period. It is suggested that the 1965 data may be rejected because of its poor goodness factor which can be attributed to poor quality of reported or recorded data. The equations representing the discharge-flow velocity with its goodness factor are shown in Table 4.

*Simmesport.*--When the flow of the Red River reaches Simmesport and is joined by the Mississippi River flow through the Old River, the flow becomes turbulent. This turbulence is indicated by the rise of  $\beta$  value from the Red River to the Simmesport station. It is noted that  $\beta$  rose steadily from 1.56 in 1965 to 2.12 in 1971. The equations representing the discharge-flow velocity relationships with its goodness factor are shown in Table 5.

Table 4.--Relation of Discharge and Velocity at Red River above Old River, Louisiana, 1964-1971

Year	Equation	Goodness Factor
1964	$Q = e^{9.83} V^{1.17}$	.787
1965	$Q = e^{10.05} V^{1.38}$	.891
1966	$Q = e^{9.85} V^{1.17}$	.900
1967	$Q = e^{10.04} V^{1.17}$	.868
1968	$Q = e^{9.58} V^{1.64}$	.915
1969	$Q = e^{10.04} V^{1.36}$	.912
1970	$Q = e^{10.03} V^{1.34}$	.920
1971	$Q = e^{9.98} V^{1.38}$	.876

Table 5.--Relation of Discharge and Velocity at Simmesport, Louisiana, 1962-1971

Year	Equation	Goodness Factor
1962	$Q = e^{9.91} V^{1.70}$	.988
1963	$Q = e^{10.07} V^{1.56}$	.765
1964	$Q = e^{9.73} V^{1.62}$	.964
1965	$Q = e^{10.02} V^{1.56}$	.835
1966	$Q = e^{9.42} V^{1.81}$	.911
1967	$Q = e^{9.27} V^{2.01}$	.957
1968	$Q = e^{9.19} V^{2.22}$	.983
1969	$Q = e^{9.45} V^{2.08}$	.715
1970	$Q = e^{9.48} V^{2.09}$	.986
1971	$Q = e^{9.52} V^{2.12}$	.972

Establishing daily velocity for the four zones is a necessary step in finding daily depth as well. Assume a mathematical relationship between discharge, flow velocity, and the flow depth in the form of

$$Q = \alpha V^{\beta} D^{\gamma} \text{ ----- (2)}$$

where:

Q is the discharge in cubic feet per second

V is the velocity in feet per second

D is the flow depth in feet

$\beta$  is the flow velocity power  
 $\gamma$  is the flow depth power  
 $\alpha$  is a constant

The flow will be affected by the depth and the velocity. Because there has not been enough data on the width, it is ignored, on the assumption that the important variables have been considered.

All the reported observed data on a yearly basis for discharge, flow velocity, and flow depth are collected. By regression analysis technique,  $\alpha$ ,  $\beta$ , and  $\gamma$  can be determined. A general mathematical equation for every year and each zone can be formulated. By substituting the available discharge and velocity data in the formulated equation, the daily flow depth can be found.

The analyses of the discharge-velocity-depth relationship for the four zones are presented in Tables 6, 7, 8 and 9.

Table 6.--Relation of Discharge and Velocity-Depth at Coochie, Louisiana, 1963-1971

Year	Equation	Goodness Factor
1963	$Q = e^{6.77} V^{1.06} D^{1.15}$	.999
1964	$Q = e^{6.64} V^{1.09} D^{1.17}$	.999
1965	$Q = e^{8.38} V^{1.22} D^{0.69}$	.994
1966	$Q = e^{10.72} V^{1.35} D^{0.05}$	.986
1967	$Q = e^{7.43} V^{1.20} D^{0.93}$	.999
1968	$Q = e^{7.32} V^{1.14} D^{0.98}$	.998
1969	$Q = e^{7.01} V^{1.16} D^{1.04}$	.996
1970	$Q = e^{7.09} V^{1.12} D^{1.04}$	.991
1971	$Q = e^{7.52} V^{1.19} D^{0.91}$	.998

Applying the different equations in Tables 6-9 for each zone and every year yields daily figures for temperature ( $^{\circ}$ F), discharge (1000 cfs), sediment-concentration (ppm), velocity (ft/sec), slope, settling velocity (ft/sec), depth (ft), and total sediment (1000 ton/day). These are given in Appendix A.



Table 7.--Relation of Discharge and Velocity-Depth at  
Tarbert's Landing, Louisiana, 1962-1971

Year	Equation	Goodness Factor
1962	$Q = e^{7.61} V^{1.01} D^{1.14}$	.999
1963	$Q = e^{7.53} V^{1.00} D^{1.17}$	.830
1964	$Q = e^{7.79} V^{1.11} D^{1.06}$	.861
1965	$Q = e^{6.17} V^{0.25} D^{1.84}$	.972
1966	$Q = e^{7.38} V^{1.15} D^{1.15}$	.999
1967	$Q = e^{7.18} V^{1.21} D^{1.19}$	.993
1968	$Q = e^{7.35} V^{1.21} D^{1.14}$	.997
1969	$Q = e^{8.00} V^{1.89} D^{0.67}$	.981
1970	$Q = e^{7.50} V^{1.27} D^{1.07}$	.993
1971	$Q = e^{7.11} V^{1.19} D^{1.04}$	.995

Table 8.--Relation of Discharge and Velocity-Depth at  
Red River above Old River, Louisiana,  
1964-1971

Year	Equation	Goodness Factor
1964	$Q = e^{4.20} V^{0.96} D^{1.74}$	.998
1965	$Q = e^{4.37} V^{1.09} D^{1.67}$	.992
1966	$Q = e^{4.99} V^{1.00} D^{1.49}$	.993
1967	$Q = e^{6.15} V^{1.10} D^{1.14}$	.934
1968	$Q = e^{4.16} V^{0.92} D^{1.77}$	.987
1969	$Q = e^{4.77} V^{1.01} D^{1.56}$	.987
1970	$Q = e^{4.95} V^{0.94} D^{1.50}$	.991
1971	$Q = e^{5.45} V^{0.96} D^{1.35}$	.995

Table 9.--Relation of Discharge and Velocity-Depth at Simmesport, Louisiana, 1962-1971

Year	Equation	Goodness Factor
1962	$Q = e^{6.43} v^{1.29} D^{1.10}$	.995
1963	$Q = e^{5.89} v^{1.06} D^{1.33}$	.774
1964	$Q = e^{6.06} v^{1.09} D^{1.27}$	.997
1965	$Q = e^{5.76} v^{1.15} D^{1.35}$	.865
1966	$Q = e^{6.13} v^{1.21} D^{1.19}$	.994
1967	$Q = e^{8.53} v^{1.65} D^{0.36}$	.961
1968	$Q = e^{7.71} v^{1.03} D^{1.09}$	.999
1969	$Q = e^{4.61} v^{2.55} D^{-0.97}$	.761
1970	$Q = e^{7.04} v^{1.09} D^{1.01}$	.999
1971	$Q = e^{9.41} v^{2.08} D^{0.04}$	.973

#### *Sedimentation and Discharge Profile*

A description of the suspended sediment in the Mississippi River would be helpful in the study of the aforementioned proposed diversion work. A sediment concentration function that relates discharge  $Q$ , flow velocity  $V$ , depth  $d$ , and sediment settling velocity  $\omega$  to the sediment concentration will be potentially valuable information. Over the past years, there have been several attempts to arrive at such relationships. Unfortunately, most of the work done carried out carefully designed experiments, selected specific parameters, and presented relationships between the flow and sediment transport based on a very special and controlled environment.

The situation is different in the Mississippi River. This research is constrained by the following: 1) there are no field experiments (impractical for the research project); 2) there are almost 80 years of discharge records, but very little data on sediment; and 3) the collected data do not precisely meet the time and place requirements.

The only remaining approach is to apply regression analysis to a lengthy series of trial and error experiments in an attempt to reach an applicable mathematical relationship with a satisfactory goodness factor.

The disadvantage of this approach is that some of the parameters might be very small or have a meaningless value. However, it still has merit in that, if the available data prove to have a good correlation, the chances are that any other data within the tested range will have the same trend.

The relationship between the discharge and the velocity has been previously presented in a curvilinear mathematical equation. However, a nonlinear model is considered for the sediment concentration model in the form of

$$\log C = \zeta_0 + \zeta_1 x + \zeta_2 x^2 + \zeta_3 x^3 \text{ ----- (3)}$$

and

$$x = V^{\zeta_5} E^{\zeta_6} W^{\zeta_7} D^{\zeta_8} \text{ ----- (3a)}$$

where:

- V is an average velocity (independent variable). It is intended as an indirect expression for the dynamic energy of the flow. On this assumption the higher the value of velocity, the greater the sediment concentration.
- d is the average flow depth (independent variable). Its values were obtained primarily from publications of the U.S. Corps of Engineers. Usually the cross-sectional area, data, width, and maximum depth at specific locations are reported. The effect of depth on sediment concentration is closely related with flow velocity, by which the flow characteristics are defined. Maintaining the same velocity value may mean a uniform distribution of concentration along the cross-sectional area.
- W is the average settling velocity (independent variable), which is actually the fall velocity of a median size sediment sample. From reported data, it is noticed that most sediment material lies in the category of what is called suspension load (average particle diameter is 0.062 mm). It is a fact that a suspension of sediment material can exist only in a flow when velocity fluctuation in the vertical direction is at least equal to the settling velocity. Schlichting (1968, pp. 525, 540) reported an average value of about 0.04 for the ratio of root-mean-square value of the velocity fluctuations and the average velocity V.
- E is the bed slope (independent variable), which is the energy slope of the flow. Because of the paucity of information, the energy slope line is assumed to have a constant value throughout the analysis.
- C is the sedimentation concentration (dependent variable).

This model can be solved by a Taylor series, in which the results of linear least squares in a succession of stages are used. Initial values for the parameters must first be estimated, based on the available information, expectations, and experience. These values supposedly will be improved with succeeding iterations. The function will ultimately converge, i.e., until the ratio of the corrected value to its corresponding estimate reaches a predetermined numerical value, or after a specified number of iterations.

### *Coochie*

A mathematical relationship between the sediment material load concentration and the flow characteristics (velocity, slope, depth, and settling velocity) was determined under the following conditions: 1) the observation sample consisted of 100 items of data; 2) the number of iterations between parameter output was 10. The sediment concentration is found to be a function of the flow velocity to the 0.52 power,

the slope to the fourth power, the settling velocity and the depth to the first power, as follows:

$$\log C = 5.6 + 33x + 0.009x^2 + 42x^3 \text{ ----- (4)}$$

where  $x = V^{0.52} S^4 W D \text{ ----- (4a)}$

*Tarbert's Landing*

Due to the fact that the computer program cannot handle more than a 700-data record, the available information on Tarbert's Landing is divided into three collections as follows:

For 1965-1966:  $\log C = 5.7 + 0.8x - 0.18x^2 + 0.01x^3 \text{ ----- (5)}$

$$x = V^{0.06} S^{1.8} W^{0.20} D^{0.5} \text{ ----- (5a)}$$

For 1967-1968:  $\log C = 5.7 + 1.1x + x^2 + 0.42x^3 \text{ ----- (6)}$

$$x = V^{0.52} S^4 W D^{0.10} \text{ ----- (6a)}$$

For 1969-1971:  $\log C = 5.7 + x + x^2 + 0.42x^3 \text{ ----- (7)}$

$$x = V^{0.52} S^4 W D^{0.10} \text{ ----- (7a)}$$

*Red River above Old River*

For zone three, 93 data items were used. The mathematical relationship was

$$\log C = 5.2 + 0.33x + 0.09x^2 + 42x^3 \text{ ----- (8)}$$

$$x = V^{0.52} S^4 W D \text{ ----- (8a)}$$

*Simmesport*

For zone four, 700 data items were used, the maximum capacity of the program. The mathematical relationship was

$$\log C = 5.6 + 0.38x + 0.09x^2 + 42x^3 \text{ ----- (9)}$$

$$x = V^{0.52} S^4 W D \text{ ----- (9a)}$$

The four mathematical models that have been presented to describe the sediment concentration need further investigation since it is the first time to this author's knowledge that such models have been formulated.

## *Conclusions*

An important relationship has existed between man and rivers since the beginning of civilization, for water has always been an integral part of man's development. There are indications that an Egyptian king, Menes, built a masonry dam across the Nile at Memphis about 4000 B.C.

Apparently river modifications cannot be successful unless enough data about the river flow are available. In addition, knowledge about the flow characteristics is necessary in order for the project objectives to be achieved. For this reason emphasis has been placed on long periods of river discharge. In fact, the flow discharge recorded data for the Mississippi River goes back to 1887.

An empirical relationship between discharge, depth, and flow velocity in the Mississippi River at Coochie, Tarbert's Landing, Red River above Old River, and Simmesport was determined by regression analysis, from which daily flow velocities and depth were obtained (see Appendix A). By the same technique, daily flow depth was found.

It should be noted that:

1. These equations are based on the reported flow velocity in a few days each year. Thus it is an open question whether or not they can be applied to other time periods.

2. These equations represent a direct relationship between the discharge and the flow velocity.

3. These equations are only valid for the data within the time and place from which they are derived and by no means can they be extrapolated, unless prior field tests have proved their validity.

4. It is difficult to predict the flow velocity and/or the flow depth deviation from the recommended mathematical forms. However, if the flow-discharge is within the range of the utilized data, the chances are very likely that the flow velocity and depth will be within the range of the previous results.

The linearization method was employed to estimate the parameters of a nonlinear system relating the sediment concentration to the velocity, depth, energy slope, and settling velocity at specified stations on the Mississippi River. However, the linearization procedure has some possible drawbacks, because of the following:

1. It may converge very slowly, i.e., a very large number of iterations may be needed, and the users may not realize that fact and thus get no solution.

2. It may oscillate widely, reversing direction.

3. It may not converge at all.

4. It may even diverge.

It is believed that an improvement of the predictive value of the previous mathematical equations may be achieved by several means. One of these would be based on additional, more frequently collected data.

It is noted that after the flow passes Coochie, part of the Mississippi River discharge is diverted to the Atchafalaya River

through Old River. The diverted amount depends greatly on the flow in the Mississippi and Red Rivers as well. In the case where the flow in the Mississippi is low, part of the Red River flow will be diverted to the Mississippi through the Old River, which explains the fact of an increasing discharge at Tarbert's Landing. On the other hand, when the flow in the Mississippi is high, part of it will be diverted to the Atchafalaya and less flow will be recorded at Tarbert's Landing station. In this case flow from the Red River will not be diverted to the Mississippi; all the Red River flow and the diverted portion of the Mississippi will be joined and noticed at Simmesport.

A study of the variation and range of sedimentation with time and discharge at the sampling stations reveals no consistent relationship. An irregular pattern for the discharge and the sedimentation is observed between Coochie and Tarbert's Landing. On the Red River Landing and the Atchafalaya River, the available records bore out the same results, i.e., no correlation. Direct relationship of sediment load to discharge, temperature and flow velocity at the sampling stations is difficult, if not impossible, to establish.

Although the data were not detailed enough to determine just what was happening, it seems certain that a decline in flow discharge results in a decline of sediment concentration. If only discharge and flow velocity are known, it is not possible to forecast the behavior of the Mississippi River at a given point. Though it is possible to forecast discharge in the River, it is impossible to predict any other changes that may occur if discharges of water, sediment, sediment size, flow velocity, bed channel and bank resistance are changed.

#### *Recommendations*

Though the flow records are abundant, the water quality data is quite another matter. The Mississippi River sediment records are inadequate, to say the least, for any serious and productive research. Of course, it is expensive to collect and analyze sediment material; in addition, it is a cumbersome task and there is a lag in modernizing sampling techniques. Regardless of any causes that may justify the almost non-existent data on sediments, it is absolutely necessary to start a serious, detailed program for the collection of data associated with sediment transport. Many agencies are involved one way or another with sedimentation topics. The coordination of the work of such agencies is definitely necessary for any kind of success for such a program, a program that should be carried out on a continuing basis with a regular and constant schedule for sampling sediment material.

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APPENDIX A



MISSISSIPPI RIVER AT COUCHIE

DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	10-7	10-3	10-3	1000	1000
080405	54	967	412	7.18	773	18	67	1679.469
140405	80	120	697	7.18	773	25	67	225.828
230405	80	127	343	7.37	773	25	67	117.615
280405	67	176	256	7.38	773	25	67	88.734
060505	97	113	169	7.39	773	28	67	51.257
130505	68	915	211	7.38	773	22	67	512.276
200505	46	729	190	7.38	773	16	67	373.977
080605	81	493	156	4.78	773	25	95	207.652
220605	93	576	777	5.35	773	28	95	1208.390
130705	81	494	79	2.70	773	25	80	105.376
300705	84	394	297	4.17	773	26	55	308.043
250705	87	439	456	4.38	773	26	57	539.972
310705	81	333	79	2.70	773	25	80	71.029
230805	85	403	583	4.23	773	26	56	634.242
280805	74	446	611	4.09	773	23	55	735.249
121105	67	526	498	5.27	773	21	56	679.334
121105	61	270	153	3.23	773	20	51	10.992
301105	50	281	111	3.37	773	19	51	83.938
221205	48	259	109	3.13	773	17	50	31.772
060106	48	334	251	3.80	773	17	53	225.953
200106	29	444	426	9.46	773	14	54	554.115
080206	37	277	143	3.31	773	13	54	136.596
230206	42	795	1178	7.70	773	15	52	2241.627
120306	44	511	325	7.70	773	16	52	439.349
110306	44	862	180	7.70	773	16	52	389.808
160306	47	723	221	7.70	773	16	52	428.559
240306	53	556	488	5.50	773	18	57	731.991
210406	57	477	9	5.14	773	19	54	11.069
190406	75	519	437	4.85	773	24	60	612.368
210406	78	199	273	4.18	773	24	55	286.816
050506	82	288	493	3.32	773	25	53	383.528
210506	87	263	270	3.16	773	26	51	193.273
240506	86	263	181	3.18	773	26	51	128.626
120606	84	211	166	2.97	773	26	48	104.543
260606	81	272	250	3.43	773	25	48	103.716
300606	82	272	100	2.89	773	25	47	113.838
220606	75	195	114	2.63	773	24	46	60.169
070706	72	207	115	2.71	773	23	47	64.334
220706	64	197	111	2.95	773	21	48	59.223
041106	57	203	130	2.26	773	19	47	71.050
171106	56	275	156	3.37	773	19	50	115.524
021206	53	261	131	3.16	773	18	51	92.277
151206	46	330	211	3.77	773	16	53	187.638
110107	43	441	172	4.73	773	14	55	204.434
260107	43	269	170	3.38	773	15	49	121.773
100207	44	477	418	5.02	773	16	56	538.878
230207	43	410	334	4.42	773	15	55	369.854
100307	46	218	428	4.61	773	16	55	251.924
220307	51	907	572	7.63	773	18	63	1400.117
070407	60	573	317	4.07	773	20	39	487.456
050507	63	755	187	6.76	773	20	60	1419.435
190507	68	843	178	7.27	773	22	55	405.447
230607	82	494	456	4.97	773	25	58	608.021
210707	79	736	216	6.47	773	25	62	428.995
110807	84	475	499	4.78	773	26	59	639.402
230807	80	337	331	3.79	773	25	55	300.743
080907	75	278	192	3.30	773	25	53	143.776
270907	78	265	152	3.22	773	24	51	109.004
131007	69	264	229	3.18	773	22	52	163.041
261007	65	315	144	3.72	773	21	52	122.229
091107	56	373	399	4.19	773	19	54	392.988
201207	48	727	400	6.90	773	17	92	942.914
170108	36	791	224	6.70	773	13	105	45.000
010208	44	568	404	5.54	773	16	46	396.000
190308	48	315	391	3.39	773	17	58	180.720
260408	64	960	347	2.39	773	21	58	898.568
170508	71	610	519	5.22	773	22	66	854.083
110708	81	446	269	4.26	773	25	64	324.145
260708	83	365	188	3.64	773	25	62	184.758
090808	81	399	191	2.91	773	25	65	195.107
220808	81	448	304	4.13	773	25	69	367.108
350908	79	270	153	2.75	773	25	66	111.666
240908	76	233	268	2.51	773	24	60	168.375
101008	70	269	187	2.85	773	22	61	135.504
251008	66	271	152	2.96	773	21	57	111.007
081108	58	290	225	3.17	773	19	57	176.087
221108	52	327	151	3.52	773	18	57	133.325
231208	43	450	241	4.40	773	15	66	293.193
130109	38	720	502	6.11	437	14	75	975.643
140209	43	1340	571	4.70	437	15	75	1064.112
210309	45	441	428	4.67	437	16	78	509.047
040409	51	889	504	6.61	437	18	79	1209.267
020509	62	1140	337	4.96	437	20	79	1036.082
230509	67	827	388	6.09	437	21	80	859.294
060609	73	481	463	5.10	437	23	79	601.695
200609	79	497	294	4.45	437	26	67	394.093
030709	82	554	479	5.39	437	25	70	829.642
170709	84	754	437	5.85	437	26	74	889.672
080809	84	603	363	4.96	437	26	69	590.494
290809	81	395	232	3.78	437	25	63	215.465
250909	77	240	155	2.79	437	24	61	117.180
101009	73	268	228	2.65	437	23	62	164.827
231009	65	539	550	4.61	437	21	60	800.320
071109	57	390	174	3.66	437	19	64	183.275
121209	44	378	194	3.64	437	16	63	197.947
290110	37	834	577	6.92	437	13	68	1300.268
290110	41	307	186	3.76	437	15	60	194.455
130210	39	694	451	5.29	437	14	67	845.914
270210	41	810	314	6.81	437	15	69	737.037
130310	48	729	381	6.15	437	17	69	748.986
270310	49	757	330	6.14	437	17	71	674.269
100410	54	849	448	7.15	437	18	69	1027.542
210410	60	988	466	7.44	437	20	72	1243.183
190607	77	743	409	5.78	437	24	70	819.043

MISSISSIPPI RIVER AT COUCHIE

DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	10-7	10-3	10-3	1000	1000
290670	81	733	386	6.28	437	25	69	763.542
170770	84	334	264	3.23	437	26	60	237.999
310770	83	288	147	2.83	437	25	59	114.542
280870	82	326	221	3.09	437	25	61	194.308
110970	83	257	148	2.47	437	25	63	101.142
250970	82	319	195	2.99	437	25	65	167.750
091070	76	640	205	5.58	437	24	67	354.704
191070	65	382	209	4.07	437	21	17	215.519
091170	59	576	362	5.12	437	19	66	562.855
091270	51	404	299	3.77	437	18	62	324.737
220271	42	933	505	7.18	437	15	36	272.834
300371	50	1842	673	7.21	437	17	41	893.837
190471	59	633	312	5.17	437	19	29	534.368
290471	68	541	254	4.77	437	22	27	371.032
240571	70	846	379	6.48	437	22	38	866.788
140671	79	458	293	4.47	437	25	27	362.329
070771	86	587	273	3.58	437	26	24	264.324
230771	86	398	278	3.71	437	26	23	299.390
160871	82	446	293	4.03	437	25	26	353.342
030971	82	317	155	3.15	437	25	20	132.940
240971	77	317	311	3.28	437	24	20	260.411
081071	75	294	186	3.02	437	24	20	148.254
221071	70	229	132	2.49	437	22	17	81.714
081171	64	295	183	3.05	437	21	19	145.714
221271	51	855	615	6.92	437	18	37	424.159
070172	47	626	355	•	773	16	60	606.661
220272	44	446	240	•	773	16	30	301.921
240372	53	888	345	•	773	18	82	826.373
070472	54	818	309	•	773	18	66	661.740
210472	62	787	317	•	773	20	67	673.824
250572	71	1012	364	•	773	22	99	994.043
280672	79	468	241	•	773	25	30	304.934
230672	82	379	277	•	773	25	39	396.541
210772	81	452	325	•	773	25	36	366.541
040872	86	426	163	•	773	26	18	187.445
160872	84	479	262	•	773	26	33	339.628
150972	84	313	179	•	773	26	15	151.760
131072	73	476	278	•	773	23	35	358.083
290972	80	415	323	•	773	25	36	362.009

MISSISSIPPI RIVER AT TARBERT LANDING								
DATE	TM	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
F	CFS	1000	PPH	F/S	F/S	FT	FT	T/D
				10-7 10-3				
21062	76	214	262	2.86	43	26	23.57	151.380
31062	75	213	258	2.85	43	26	23.55	148.380
41062	74	213	254	2.85	43	26	23.55	146.080
51062	74	214	254	2.86	43	26	23.57	146.760
61062	74	214	257	2.86	43	26	23.57	148.490
71062	74	216	261	2.87	43	26	23.69	152.220
81062	74	217	266	2.87	43	26	23.79	155.850
91062	74	221	274	2.90	43	26	23.95	163.500
101062	74	228	278	2.94	43	26	24.32	171.140
111062	74	238	281	2.99	43	26	24.87	180.570
121062	74	250	290	3.06	43	26	25.44	195.750
131062	74	254	319	3.08	43	26	25.65	216.770
141062	74	259	338	3.11	43	26	25.87	236.360
151062	75	252	355	3.07	43	26	25.55	241.540
161062	74	244	362	3.03	43	26	25.13	238.490
171062	75	238	320	2.94	43	26	24.87	205.630
181062	75	233	270	2.97	43	26	24.56	169.860
191062	75	228	232	2.94	43	26	24.32	142.820
201062	75	230	233	2.95	43	26	24.43	144.690
211062	75	236	238	2.98	43	26	24.76	151.650
221062	75	238	241	2.99	43	26	24.87	154.870
231062	74	236	242	2.98	43	26	24.76	154.200
241062	73	236	243	2.98	43	26	24.76	154.840
251062	72	243	243	3.02	43	26	25.11	159.430
261062	71	245	240	3.03	43	26	25.22	158.760
271062	70	245	236	3.03	43	26	25.22	156.110
281062	69	234	234	2.97	43	26	24.65	147.840
291062	68	226	223	2.93	43	26	24.20	142.160
301062	65	219	228	2.89	43	26	23.83	134.820
311062	68	214	218	2.86	43	26	23.57	125.960
11162	68	210	214	2.83	43	26	23.40	121.340
21162	68	204	205	2.80	43	26	23.03	112.910
31162	65	198	195	2.76	43	26	22.72	104.250
41162	63	195	195	2.74	43	26	22.57	102.670
51162	63	193	190	2.73	43	26	22.43	99.010
61162	62	193	180	2.73	43	26	22.43	93.800
71162	62	193	175	2.73	43	26	22.43	91.190
81162	61	193	175	2.73	43	26	22.43	91.190
91162	61	192	191	2.72	43	26	22.41	95.010
101162	60	190	216	2.71	43	26	22.27	110.810
111162	60	189	243	2.71	43	26	22.17	124.000
121162	59	189	259	2.70	43	26	22.14	131.470
131162	58	188	273	2.70	43	26	22.14	138.570
141162	58	185	267	2.68	43	26	21.97	133.370
151162	54	182	195	2.66	43	26	21.81	95.820
161162	57	179	182	2.64	43	26	21.63	87.960
171162	57	180	183	2.65	43	26	21.67	88.940
181162	57	188	184	2.70	43	26	22.14	93.400
191162	57	197	168	2.76	43	26	22.62	102.000
201162	57	214	215	2.86	43	26	23.57	124.230
211162	56	223	239	2.97	43	26	24.56	150.350
221162	56	252	263	3.07	43	26	25.55	178.950
140163	42	269	259	2.77	43	15	29.35	188.110
150163	42	255	252	2.68	43	15	28.84	173.500
160163	42	238	246	2.57	43	15	28.18	158.080
170163	41	223	260	2.47	43	15	27.57	156.550
180163	42	219	380	2.44	43	15	27.43	224.690
190163	41	219	520	2.44	43	15	27.43	307.480
200163	42	244	640	2.61	43	15	28.41	421.630
210163	42	236	635	2.56	43	15	28.07	404.620
220163	42	236	605	2.56	43	15	28.07	385.510
230163	41	242	510	2.60	43	15	28.30	333.230
240163	40	247	475	2.62	43	14	28.52	316.780
250163	40	255	445	2.68	43	14	28.84	306.380
260163	40	266	420	2.75	43	14	29.25	301.640
270163	40	274	390	2.81	43	14	29.45	288.520
280163	38	273	360	2.80	43	14	29.45	265.360
290163	37	263	330	2.74	43	13	29.05	234.330
300163	37	252	310	2.66	43	13	28.73	210.920
310163	42	241	277	2.56	43	15	28.29	180.240
10263	36	223	262	2.47	43	13	27.57	157.750
20263	36	208	245	2.36	43	13	27.01	137.590
30263	37	196	230	2.28	43	13	26.44	121.720
40263	37	186	212	2.21	43	13	25.97	106.470
50263	37	183	198	2.18	43	13	25.91	97.830
60263	38	180	187	2.16	43	14	25.75	90.880
70263	38	177	180	2.14	43	14	25.58	86.020
80263	38	176	175	2.13	43	14	25.56	83.160
90263	39	179	171	2.15	43	14	25.73	82.640
100263	40	179	172	2.15	43	14	25.73	83.130
110263	39	185	180	2.20	43	14	25.95	89.910
120263	39	188	192	2.22	43	14	26.11	97.460
130263	39	192	207	2.25	43	14	26.28	107.310
140263	39	209	217	2.37	43	14	27.02	122.450
150263	39	228	235	2.50	43	14	27.81	144.670
160263	40	243	243	2.60	43	14	28.40	159.430
170263	40	258	246	2.70	43	14	28.94	171.360
180263	40	269	250	2.77	43	14	29.35	181.580
190263	40	281	254	2.85	43	14	29.73	192.710
200263	40	287	254	2.90	43	14	30.00	198.200
210263	40	298	251	2.89	43	14	30.00	195.180
220263	39	283	248	2.86	43	14	29.82	185.500
230263	40	278	243	2.83	43	14	29.64	182.400
240263	42	275	237	2.81	43	14	29.54	175.970
250263	42	269	230	2.77	43	15	29.35	167.050
260263	40	254	223	2.68	43	15	28.74	152.930
270263	40	235	216	2.55	43	14	28.06	137.050
280263	40	225	207	2.48	43	14	27.65	125.750
10363	40	217	189	2.43	43	14	27.32	110.740
20363	42	216	179	2.42	43	15	27.30	104.390
30363	45	216	175	2.42	43	16	27.30	102.060
40363	44	223	174	2.47	43	16	27.57	104.770
50363	46	226	181	2.49	43	16	27.70	110.450
60363	46	231	201	2.52	43	16	27.93	125.360

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	T/D
F	CFS	1000	PPH	F/S	F/S	FT	FT	T/D	1000
				10-7 10-3					1000
231162	55	263	202	3.13	43	26	26.07	200.250	200.250
241162	54	270	304	3.16	43	26	26.46	221.620	221.620
251162	55	274	318	3.18	43	26	26.65	235.260	235.260
261162	54	275	330	3.19	43	26	26.66	245.030	245.030
271162	54	272	329	3.17	43	26	26.55	241.620	241.620
281162	54	268	327	3.15	43	26	26.16	236.670	236.670
291162	54	262	316	3.12	43	26	26.08	223.540	223.540
301162	54	254	315	3.08	43	26	25.65	216.030	216.030
11262	54	256	320	3.09	43	26	25.76	221.180	221.180
21262	54	262	330	3.12	43	26	26.06	233.440	233.440
31262	54	268	290	3.15	43	26	26.30	205.640	205.640
41262	54	271	260	3.17	43	26	26.47	190.240	190.240
51262	54	274	235	3.18	43	26	26.65	173.550	173.550
61262	54	276	228	3.19	43	26	26.75	169.710	169.710
71262	51	278	222	3.20	43	26	26.84	166.630	166.630
81262	53	274	219	3.18	43	26	26.65	162.020	162.020
91262	52	260	219	3.11	43	26	25.56	152.740	152.740
101262	51	242	224	3.02	43	26	25.02	146.370	146.370
111262	50	226	240	2.93	43	26	24.20	146.450	146.450
121262	50	212	231	2.85	43	26	23.45	132.220	132.220
131262	49	205	219	2.80	43	26	23.13	121.220	121.220
141262	49	200	191	2.77	43	26	22.85	103.140	103.140
151262	48	200	179	2.77	43	26	22.85	96.660	96.660
161262	46	200	167	2.77	43	26	22.85	90.180	90.180
171262	46	200	156	2.77	43	26	22.85	84.240	84.240
181262	46	197	152	2.76	43	26	22.62	80.640	80.640
191262	45	193	148	2.73	43	26	22.43	77.120	77.120
201262	45	186	144	2.65	43	26	22.01	72.320	72.320
211262	45	179	143	2.64	43	26	21.63	69.110	69.110
221262	45	170	141	2.58	43	26	21.10	64.720	64.720
231262	45	160	140	2.52	43	26	20.43	60.510	60.510
241262	45	156	140	2.49	43	26	20.00	56.770	56.770
251262	45	154	140	2.47	43	26	20.11	58.210	58.210

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TM	D/S	SED	VEL	SLP	SVEL	DEP	TSED	
F		CF5	PPH	F/S	10-7	10-3	FT	T/D	
1000		1000						1000	
280463	66	257	356	2.70	43	21	28.85	247.030	
290463	66	250	347	2.65	43	21	28.63	234.230	
300463	67	245	329	2.62	43	21	28.41	217.630	
10563	68	245	306	2.62	43	21	28.41	202.420	
20563	68	248	290	2.64	43	21	28.52	194.180	
30563	68	255	285	2.68	43	22	28.84	196.220	
40563	68	273	290	2.80	43	22	29.45	213.760	
50563	68	288	317	2.85	43	22	30.00	246.500	
60563	68	309	332	3.02	43	22	30.69	276.990	
70563	68	333	354	3.17	43	22	31.38	318.280	
80563	69	358	403	3.31	43	22	32.18	365.540	
90563	69	376	450	3.41	43	22	32.71	456.840	
100563	69	378	476	3.43	43	22	32.70	485.810	
110563	69	371	460	3.39	43	22	32.50	460.780	
120563	69	362	407	3.34	43	22	32.23	397.800	
130563	70	349	258	3.26	43	22	31.90	243.110	
140563	70	334	251	3.17	43	22	31.46	226.350	
150563	71	319	255	3.08	43	22	31.01	215.630	
160563	73	309	259	3.02	43	22	30.69	216.080	
170563	75	298	268	2.96	43	23	30.26	215.630	
180563	75	288	290	2.89	43	24	29.64	225.500	
190563	75	278	355	2.83	43	24	29.64	266.460	
200563	76	270	369	2.78	43	24	29.35	265.000	
210563	76	264	355	2.74	43	24	29.15	251.040	
220563	76	260	324	2.72	43	24	28.95	227.450	
230563	76	258	274	2.70	43	24	28.94	190.870	
240563	76	260	245	2.72	43	24	28.95	171.590	
250563	76	265	257	2.75	43	24	29.15	182.880	
260563	76	276	270	2.82	43	24	29.54	201.200	
270563	76	286	299	2.88	43	24	29.91	230.890	
280563	75	298	335	2.96	43	24	30.26	269.540	
290563	75	307	361	3.01	43	24	30.60	299.230	
300563	75	314	402	3.05	43	24	30.85	340.820	
310563	75	315	449	3.06	43	24	30.85	381.870	
10663	75	309	482	3.02	43	24	30.69	402.130	
20663	74	305	528	3.00	43	23	30.52	434.810	
30663	74	305	550	3.00	43	23	30.52	452.930	
40663	74	314	557	3.05	43	23	30.85	472.220	
50663	74	319	554	3.08	43	23	31.01	477.160	
60663	75	320	435	3.09	43	23	31.00	375.840	
70663	76	318	402	3.08	43	24	30.92	345.160	
80663	76	309	368	3.02	43	24	30.69	307.020	
90663	77	301	339	2.97	43	24	30.44	275.510	
100663	78	292	306	2.92	43	24	30.09	241.250	
110663	78	283	286	2.86	43	24	29.82	218.530	
120663	79	274	285	2.81	43	24	29.45	210.840	
130663	80	266	282	2.75	43	24	29.25	202.530	
140663	81	257	279	2.70	43	25	28.85	192.600	
150663	81	253	277	2.67	43	25	28.74	189.220	
160663	83	251	278	2.66	43	25	28.63	188.460	
170663	79	255	267	2.68	43	25	28.84	183.830	
180663	83	259	223	2.71	43	25	28.95	155.940	
190663	82	264	227	2.74	43	25	29.15	161.810	
200663	83	268	231	2.77	43	25	29.25	167.150	
210663	82	271	240	2.79	43	25	29.35	175.610	
220663	82	271	253	2.79	43	25	29.35	185.120	
230663	82	271	265	2.79	43	25	29.35	193.900	
240663	82	268	282	2.77	43	25	29.25	204.060	
250663	82	264	294	2.74	43	25	29.15	209.560	
260663	82	254	300	2.68	43	25	28.74	205.740	
270663	82	243	308	2.60	43	25	28.40	202.060	
280663	83	238	307	2.57	43	25	28.18	197.280	
290663	83	234	308	2.54	43	25	28.05	194.590	
300663	82	232	306	2.53	43	25	27.94	191.880	
10763	82	240	305	2.58	43	25	28.29	197.640	
20763	82	234	293	2.54	43	25	28.05	185.120	
30763	82	230	287	2.52	43	25	27.83	178.230	
40763	83	228	281	2.50	43	25	27.81	172.580	
50763	84	225	260	2.48	43	25	27.69	157.950	
60763	84	221	244	2.45	43	25	27.55	145.590	
70763	84	218	223	2.42	43	25	27.42	131.260	
80763	85	218	202	2.43	43	25	27.42	118.500	
90763	86	219	181	2.44	43	26	27.43	107.030	
100763	86	218	176	2.43	43	26	27.42	103.590	
110763	86	218	171	2.43	43	26	27.42	100.650	
120763	86	216	166	2.42	43	26	27.30	96.810	
130763	85	212	176	2.39	43	26	27.16	100.740	
140763	85	208	186	2.36	43	26	27.01	104.460	
150763	85	201	216	2.31	43	26	26.72	117.220	
160763	85	198	246	2.29	43	26	26.57	131.510	
170763	85	196	277	2.28	43	26	26.44	146.590	
180763	86	196	307	2.26	43	26	26.44	162.460	
190763	86	196	333	2.28	43	26	26.44	176.220	
200763	86	196	358	2.28	43	26	26.44	189.450	
210763	85	200	364	2.31	43	26	26.60	196.560	
220763	85	204	359	2.34	43	26	26.76	197.740	
230763	84	206	351	2.35	43	26	26.89	195.230	
240763	85	208	332	2.36	43	25	27.01	186.450	
250763	85	208	304	2.36	43	25	27.01	170.730	
260763	82	212	265	2.35	43	25	27.16	151.690	
270763	83	218	262	2.43	43	26	27.42	154.210	
280763	83	223	244	2.47	43	26	27.57	146.910	
290763	84	228	229	2.50	43	26	27.81	140.970	
300763	84	230	221	2.52	43	26	27.83	137.240	
310763	84	230	219	2.52	43	26	27.83	136.000	
10863	84	230	216	2.52	43	26	27.83	134.140	
20863	85	225	219	2.48	43	26	27.69	125.040	
30863	85	221	215	2.45	43	26	27.55	120.290	
40863	85	214	212	2.41	43	26	27.18	122.490	
50863	85	209	211	2.37	43	26	27.02	119.070	
60863	85	206	204	2.35	43	26	26.89	113.460	
70863	85	204	198	2.34	43	26	26.76	109.060	
80863	86	203	191	2.33	43	26	26.75	104.690	
90863	86	201	178	2.31	43	27	26.72	96.600	

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TM	D/S	SED	VEL	SLP	SVEL	DEP	TSED	
F		CF5	PPH	F/S	10-7	10-3	FT	T/D	
1000		1000						1000	
100863	87	201	166	2.31	43	27	26.72	90.090	
110863	88	200	160	2.31	43	27	26.60	86.400	
120863	88	200	153	2.31	43	27	26.60	82.620	
130863	88	201	148	2.31	43	27	26.72	80.320	
140863	88	201	145	2.31	43	27	26.72	78.690	
150863	88	200	139	2.31	43	26	26.60	75.060	
160863	88	194	133	2.26	43	26	26.41	69.670	
170863	87	190	127	2.23	43	26	26.24	65.150	
180863	86	189	121	2.23	43	26	26.12	61.750	
190863	86	188	111	2.22	43	26	26.11	56.340	
200863	86	188	105	2.22	43	26	26.11	53.300	
210863	86	188	95	2.22	43	26	26.11	48.220	
220863	86	182	84	2.18	43	26	25.79	41.280	
230863	86	170	79	2.09	43	26	25.22	36.260	
240863	85	166	81	2.06	43	26	25.02	36.300	
250863	85	164	83	2.04	43	26	24.57	36.750	
260863	86	161	89	2.02	43	26	24.79	38.690	
270863	86	161	93	2.02	43	26	24.79	40.430	
280863	86	161	99	2.02	43	26	24.79	43.040	
290863	86	161	103	2.02	43	26	24.79	44.770	
300863	86	160	108	2.01	43	26	24.76	46.660	
310863	86	160	113	2.01	43	26	24.76	48.820	
10963	86	161	118	2.02	43	26	24.79	51.290	
20963	86	160	123	2.01	43	26	24.76	53.140	
30963	86	157	128	1.99	43	26	24.57	54.260	
40963	85	157	133	1.99	43	26	24.57	56.380	
50963	86	160	135	2.01	43	26	24.76	58.320	
60963	86	162	133	2.02	43	26	24.92	58.170	
70963	86	166	128	2.06	43	26	25.02	57.370	
80963	85	166	123	2.06	43	26	25.02	55.130	
90963	85	162	118	2.02	43	26			

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F	CFS	PPH	PPH	F/S	F/S	F/S	FT	T/D	
	1000			10-7	10-3			1000	
221163	58	130	98	1.84	43	19	23.68	36.780	
231163	55	138	100	1.83	43	18	23.64	37.260	
241163	54	137	102	1.82	43	18	23.60	37.730	
251163	54	136	103	1.82	43	18	23.46	37.820	
261163	54	135	104	1.81	43	18	23.42	37.910	
271163	54	136	104	1.82	43	18	23.46	38.150	
281163	55	139	105	1.84	43	18	23.68	39.410	
291163	58	141	105	1.86	43	19	23.75	39.970	
301163	58	145	105	1.89	43	19	23.99	41.110	
11263	58	147	103	1.91	43	19	24.06	40.860	
21263	54	151	101	1.94	43	18	24.29	41.180	
31263	54	153	102	1.95	43	18	24.46	42.140	
41263	54	151	101	1.94	43	18	24.29	41.180	
51263	54	152	101	1.95	43	18	24.32	41.450	
61263	53	157	101	1.99	43	18	24.57	42.810	
71263	54	161	105	2.02	43	18	24.79	45.640	
81263	53	166	111	2.06	43	18	25.02	49.750	
91263	53	169	122	2.08	43	18	25.20	55.670	
101263	52	169	148	2.08	43	18	25.20	67.530	
111263	49	171	193	2.09	43	17	25.25	82.110	
121263	47	174	213	2.12	43	16	25.42	100.070	
131263	46	175	218	2.12	43	16	25.54	103.010	
141263	45	175	212	2.12	43	16	25.54	100.170	
151263	47	176	206	2.13	43	16	25.56	97.890	
161263	47	175	200	2.12	43	16	25.54	94.500	
171263	48	173	189	2.11	43	17	25.39	88.280	
181263	49	171	178	2.09	43	17	25.35	82.180	
191263	48	170	171	2.09	43	17	25.22	78.460	
201263	50	171	157	2.09	43	17	25.32	72.490	
211263	50	173	151	2.11	43	17	25.39	70.510	
221263	47	173	146	2.11	43	16	25.39	68.200	
231263	48	173	140	2.11	43	17	25.39	65.390	
241263	48	170	135	2.09	43	17	25.22	61.970	
251263	48	166	125	2.06	43	17	25.02	56.030	
261263	47	161	123	2.02	43	16	24.79	53.470	
271263	50	155	118	1.97	43	17	24.51	49.380	
281263	50	151	116	1.94	43	17	24.29	47.290	
291263	50	146	112	1.90	43	17	24.02	44.150	
301263	47	142	110	1.87	43	16	23.78	42.170	
311263	45	136	108	1.82	43	16	23.46	39.660	
10164	40	128	106	1.84	43	14	22.34	36.630	
20164	40	125	107	1.82	43	14	22.10	36.110	
30164	43	125	107	1.82	43	15	22.10	36.110	
40164	40	125	111	1.82	43	14	22.10	37.460	
50164	40	124	115	1.81	43	14	22.06	38.500	
60164	40	122	122	1.80	43	14	21.85	40.190	
70164	40	120	132	1.78	43	14	21.77	42.770	
80164	40	120	141	1.78	43	14	21.77	45.680	
90164	39	120	151	1.78	43	14	21.77	48.720	
100164	39	123	161	1.81	43	14	21.85	53.470	
110164	40	126	182	1.83	43	14	22.14	61.520	
120164	39	133	204	1.88	43	14	22.65	73.260	
130164	37	146	266	1.97	43	13	23.55	104.860	
140164	39	154	359	2.02	43	14	24.00	145.270	
150164	39	162	421	2.08	43	14	24.54	184.150	
160164	39	192	464	2.27	43	14	26.29	240.540	
170164	40	225	506	2.46	43	14	28.07	307.460	
180164	40	240	488	2.54	43	14	28.85	316.220	
190164	39	250	409	2.60	43	14	29.25	289.570	
200164	40	256	620	2.62	43	14	29.56	250.210	
210164	39	256	321	2.63	43	14	29.56	221.680	
220164	39	255	300	2.62	43	14	29.57	206.550	
230164	45	254	280	2.67	43	16	29.46	192.020	
240164	46	248	258	2.58	43	16	29.27	172.760	
250164	46	248	247	2.58	43	16	29.27	165.390	
260164	47	237	235	2.53	43	16	28.82	150.380	
270164	48	217	223	2.41	43	17	27.71	130.660	
280164	47	208	212	2.36	43	16	27.22	119.060	
290164	45	204	211	2.34	43	16	26.96	116.220	
300164	48	204	215	2.34	43	17	26.96	118.420	
310164	43	213	217	2.39	43	17	27.47	124.800	
10264	48	223	221	2.45	43	17	27.95	133.060	
20264	48	235	233	2.51	43	17	28.63	147.840	
30264	48	250	248	2.60	43	17	29.25	167.400	
40264	48	265	365	2.67	43	17	30.06	261.160	
50264	47	273	356	2.71	43	16	30.44	262.410	
60264	47	279	356	2.74	43	16	30.71	268.170	
70264	47	280	342	2.75	43	16	30.70	258.550	
80264	48	278	326	2.74	43	17	30.61	244.700	
90264	45	273	309	2.71	43	16	30.44	227.720	
100264	48	267	290	2.68	43	17	30.16	209.060	
110264	47	260	270	2.65	43	16	29.76	189.540	
120264	45	252	249	2.61	43	16	29.36	169.420	
130264	50	244	237	2.56	43	17	29.06	156.140	
140264	48	232	224	2.50	43	17	28.41	140.310	
150264	50	225	212	2.46	43	17	28.07	128.790	
160264	46	221	212	2.44	43	16	27.83	126.500	
170264	50	220	212	2.43	43	17	27.83	125.930	
180264	50	225	217	2.46	43	17	28.07	131.830	
190264	46	230	222	2.49	43	16	28.29	137.860	
200264	47	233	227	2.50	43	16	28.52	142.810	
210264	47	234	222	2.51	43	16	28.52	146.580	
220264	48	237	234	2.53	43	17	28.62	149.740	
230264	47	239	237	2.54	43	16	28.73	152.940	
240264	44	246	242	2.57	43	16	29.17	160.740	
250264	46	262	263	2.66	43	16	29.86	186.050	
260264	46	281	283	2.75	43	16	30.80	214.710	
270264	47	295	244	2.82	43	16	31.41	154.350	
280264	47	302	224	2.86	43	16	31.64	182.650	
290264	48	304	236	2.87	43	17	31.72	193.710	
10364	48	304	267	2.87	43	17	31.72	219.150	
20364	48	312	298	2.91	43	17	32.04	251.040	
30364	52	327	350	2.98	43	18	32.67	309.020	
40364	52	307	402	2.98	43	18	31.90	333.220	

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F	CFS	PPH	PPH	F/S	F/S	F/S	FT	T/D	
	1000			10-7	10-3			1000	
50364	52	302	444	2.86	43	18	31.64	362.040	
60364	49	281	477	2.75	43	17	30.80	361.900	
70364	54	261	500	2.65	43	18	29.87	352.350	
80364	52	249	514	2.59	43	18	29.26	345.560	
90364	50	249	554	2.59	43	17	29.26	372.550	
100364	50	272	630	2.71	43	17	30.33	462.670	
110364	50	312	700	2.91	43	17	32.04	589.680	
120364	55	390	805	3.26	43	18	35.12	847.670	
130364	56	476	995	3.60	43	19	38.20	127.370	
140364	56	559	45	3.91	43	19	40.77	577.220	
150364	56	640	145	4.19	43	19	43.08	978.560	
160364	53	702	220	4.39	43	18	44.77	313.390	
170364	57	741	175	4.52	43	19	45.69	350.820	
180364	48	766	60	4.59	43	17	46.40	192.250	
190364	51	798	975	4.69	43	18	47.15	100.740	
200364	49	823	908	4.77	43	17	47.69	171.670	
210364	48	835	855	4.80	43	17	48.02	527.600	
220364	49	851	800	4.85	43	17	48.36	838.160	
230364	54	862	770	4.88	43	18	48.64	792.100	
240364	54	872	730	4.91	43	18	48.86	718.710	
250364	59	886	682	4.95	43	19	49.18	631.480	
260364	56	896	635	4.98	43	19	49.39	546.190	
270364	55	904	590	5.00	43	18	49.59	440.070	
280364	54	916	555	5.03	43	18	49.90	372.630	
290364	55	923	490	5.05	43	18	50.05	221.130	
300364	54	927	450	5.06	43	18	50.15	126.310	
310364	54	934	425	5.08	43	18	50.30	71.770	
10464	54	936	389	5.09	43	18	50.30	583.080	
20464	56	939	382	5.10	43	19	50.35	568.480	
30464	55	941	370	5.10	43	18	50.45	940.060	
40464	56	939	358	5.10	43	19	50.35</		

MISSISSIPPI RIVER AT TARBERT LANDING								
DATE	TM	CIS	SED	VEL	SLP	SVEL	DEP	TSED
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D
		1000		10-7	10-3			1000
170664	81	270	439	2.70	43	25	30.24	320.030
180664	81	263	419	2.66	43	25	29.96	297.530
190664	82	265	390	2.68	43	25	30.05	280.100
200664	82	265	371	2.67	43	25	30.06	265.450
210664	83	263	370	2.66	43	25	29.66	262.740
220664	83	261	368	2.65	43	25	29.87	259.330
230664	83	263	374	2.66	43	25	29.96	265.580
240664	83	309	388	2.89	43	25	31.98	323.710
250664	83	360	412	3.13	43	25	33.58	400.460
260664	83	403	445	3.31	43	25	35.65	484.200
270664	82	431	478	3.43	43	25	36.59	556.250
280664	82	443	511	3.47	43	25	37.10	611.210
290664	83	443	534	3.47	43	25	37.10	638.720
300664	82	416	577	3.37	43	25	36.05	648.090
107664	82	422	607	3.39	43	25	36.31	691.620
207664	83	430	638	3.42	43	25	36.62	740.720
307664	82	437	679	3.45	43	25	36.84	801.150
407664	82	437	710	3.45	43	25	36.84	837.730
507664	82	422	741	3.39	43	25	36.31	844.300
607664	82	409	761	3.34	43	25	35.81	840.370
707664	83	394	780	3.27	43	25	35.34	829.760
807664	83	373	800	3.18	43	25	34.56	805.680
907664	83	356	819	3.11	43	25	33.85	787.220
1007664	83	322	838	3.00	43	25	32.91	751.180
1107664	83	306	832	2.88	43	25	31.80	687.400
1207664	84	287	837	2.78	43	26	31.07	648.590
1307664	84	276	820	2.73	43	26	30.52	611.060
1407664	84	270	807	2.70	43	26	30.24	588.300
1507664	83	258	776	2.64	43	25	29.66	540.560
1607664	83	266	734	2.68	43	25	30.05	527.160
1707664	83	262	673	2.66	43	25	29.86	476.080
1807664	83	260	532	2.65	43	25	29.76	373.460
1907664	83	257	411	2.63	43	25	29.67	285.190
2007664	83	256	361	2.63	43	25	29.56	249.520
2107664	83	245	340	2.57	43	25	29.17	225.830
2207664	84	244	305	2.56	43	26	29.06	200.930
2307664	84	242	300	2.55	43	26	28.95	196.020
2407664	83	242	295	2.55	43	25	28.95	192.750
2507664	83	242	290	2.55	43	25	28.95	189.490
2607664	83	240	290	2.54	43	25	28.85	187.920
2707664	83	239	290	2.53	43	25	28.74	186.350
2807664	85	235	290	2.51	43	26	28.63	184.010
2907664	84	230	290	2.49	43	26	28.29	180.090
3007664	83	225	282	2.46	43	25	28.07	177.390
108664	84	215	295	2.40	43	26	27.59	171.250
208664	83	208	289	2.36	43	26	27.22	162.300
308664	83	204	289	2.34	43	25	26.96	159.180
408664	83	198	288	2.30	43	25	26.69	152.960
508664	84	192	288	2.27	43	26	26.29	145.300
608664	83	189	282	2.25	43	25	26.14	143.900
708664	84	187	282	2.24	43	26	26.00	142.380
808664	84	184	277	2.22	43	26	25.85	137.610
908664	83	174	268	2.16	43	25	25.24	125.910
1008664	84	168	238	2.12	43	26	24.90	107.960
1108664	84	164	208	2.09	43	26	24.70	92.100
1208664	85	163	178	2.09	43	26	24.56	76.340
1308664	85	163	163	2.09	43	26	24.56	71.740
1408664	84	163	147	2.05	43	26	24.56	64.690
1508664	84	165	137	2.10	43	26	24.72	61.030
1608664	84	165	132	2.10	43	26	24.72	58.810
1708664	84	165	125	2.10	43	26	24.72	55.690
1808664	81	165	116	2.10	43	25	24.72	51.680
1908664	84	160	114	2.07	43	26	24.38	49.250
2008664	83	159	109	2.06	43	25	24.36	46.790
2108664	84	159	106	2.06	43	26	24.36	45.510
2208664	83	157	106	2.05	43	25	24.19	44.930
2308664	83	156	106	2.04	43	25	24.17	44.650
2408664	82	155	106	2.03	43	25	24.15	44.300
2508664	81	163	109	2.09	43	25	24.56	47.970
2608664	81	165	112	2.10	43	25	24.72	49.900
2708664	81	166	114	2.11	43	25	24.74	51.090
2808664	81	167	116	2.11	43	25	24.74	52.170
2908664	81	157	118	2.05	43	25	24.19	50.020
3008664	83	158	116	2.05	43	25	24.34	49.490
1098664	80	165	113	2.10	43	25	24.72	50.340
2098664	83	168	112	2.12	43	25	24.90	50.800
3098664	82	174	112	2.16	43	25	25.24	52.620
4098664	84	172	111	2.14	43	26	25.21	51.550
5098664	84	174	107	2.16	43	26	25.24	50.270
6098664	83	174	103	2.16	43	25	25.24	48.390
7098664	84	174	102	2.16	43	26	25.24	47.920
8098664	81	174	102	2.16	43	25	25.24	47.920
9098664	80	184	102	2.22	43	25	25.85	50.670
1009864	80	180	105	2.24	43	25	26.13	53.300
2009864	83	183	107	2.21	43	25	25.84	52.870
3009864	80	187	110	2.24	43	25	26.00	55.540
4009864	82	184	122	2.22	43	25	25.85	60.610
5009864	80	168	132	2.17	43	25	24.90	55.880
6009864	79	169	151	2.13	43	25	24.91	68.900
7009864	79	168	161	2.12	43	25	24.90	73.030
8009864	79	166	165	2.11	43	25	24.74	73.950
9009864	79	164	173	2.09	43	25	24.70	76.600
10009864	77	164	165	2.09	43	24	24.70	73.060
20009864	78	163	150	2.09	43	24	24.56	66.010
30009864	78	163	131	2.09	43	24	24.56	67.650
40009864	78	164	117	2.09	43	24	24.70	61.810
50009864	83	166	109	2.11	43	25	24.74	60.850
60009864	83	168	105	2.12	43	25	24.90	47.630
70009864	83	171	103	2.14	43	25	25.07	47.560
80009864	83	169	109	2.13	43	25	24.91	45.740
90009864	83	165	122	2.10	43	25	24.72	54.350
100009864	83	162	145	2.08	43	25	24.54	63.420
200009864	83	158	160	2.05	43	25	24.34	71.670
300009864	83	157	197	2.05	43	25	24.19	83.510

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TM	CIS	SED	VEL	SLP	SVEL	DEP	TSED	
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D	Y/D
		1000		10-7	10-3			1000	1000
290964	83	158	216	2.05	43	25	24.34	92.150	
300964	83	166	232	2.11	43	25	24.74	103.580	
110664	72	171	316	2.14	43	23	25.07	145.900	
210664	72	175	347	2.16	43	23	25.37	163.560	
310664	72	179	374	2.19	43	23	25.55	180.750	
410664	72	203	398	2.33	43	23	26.96	216.140	
510664	74	257	414	2.63	43	23	29.67	287.270	
610664	72	251	421	2.60	43	23	29.36	285.310	
710664	72	241	428	2.55	43	23	28.84	278.500	
810664	74	231	433	2.49	43	23	28.41	270.660	
910664	74	225	439	2.46	43	23	28.07	266.690	
1010664	74	225	423	2.46	43	23	28.07	256.970	
1110664	74	223	404	2.45	43	23	27.95	243.250	
1210664	74	218	385	2.42	43	23	27.71	226.610	
1310664	74	249	356	2.55	43	23	29.26	239.340	
1410664	74	214	321	2.40	43	23	27.47	185.470	
1510664	74	208	292	2.36	43	23	27.22	163.990	
1610664	74	207	272	2.36	43	23	27.10	152.620	
1710664	74	205	248	2.35	43	23	26.97	137.270	
1810664	74	201	231	2.32	43	23	26.83	125.360	
1910664	74	196	214	2.29	43	23	26.56	113.250	
2010664	76	184	201	2.22	43	24	25.85	85.660	
2110664	74	175	189	2.16	43	23	25.37	89.300	
2210664	73	172	179	2.14	43	23	25.21	83.130	
2310664	72	166	173	2.11	43	23	24.74	77.540	
2410664	72	164	165	2.09	43	23	24.70	73.660	
2510664	72	163	156	2.09	43	23	24.56	68.660	
2610664	72	162	148	2.07	43	23	24.54	64.740	
2710664	72	160	142	2.07	43	23	24.38	61.340	
2810664	72	150	132	2.00	43	23	23.76	55.890	
2910664	70	154	133	2.03	43	22	24.00	55.300	
3010664	67	156	131	2.04	43	21	24.17	55.180	
3110664	68	160	129	2.07	43	22	24.38	55.730	
111664	69	162	128	2.08	43	22	24.54	55.550	
211664	65	162	128	2.08	43	21	24.54	55.990	
311664	65	155	127	2.03	43	21			

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	DIS CFS	SED PPM	VEL F/S	SLP F/S	SVEL F/S	CEP FT	TSED T/D
		1000		10-7 10-3				1000
110165	50	370	614	3.52	43	17	31.31	613.39C
120165	51	401	655	3.67	43	18	32.52	709.170
130165	50	441	671	3.85	43	17	34.02	798.960
140165	53	475	698	3.95	43	18	35.25	895.190
150165	48	502	733	4.11	43	17	36.18	993.91C
160165	52	526	748	4.20	43	18	37.00	62.310
170165	46	549	764	4.30	43	16	37.75	132.480
180165	49	569	770	4.37	43	17	38.41	182.95C
190165	47	573	774	4.39	43	16	38.53	197.460
200165	47	577	780	4.40	43	16	38.67	215.160
210165	49	573	744	4.35	43	17	38.53	151.040
220165	47	570	690	4.38	43	16	38.44	61.910
230165	45	570	620	4.38	43	16	38.44	954.180
240165	45	559	550	4.33	43	16	38.09	830.110
250165	50	539	465	4.26	43	17	37.43	676.710
260165	46	514	385	4.15	43	16	36.60	534.300
270165	48	492	223	4.06	43	17	35.85	296.230
280165	46	463	227	3.94	43	16	34.83	283.770
290165	48	433	227	3.81	43	17	33.73	277.080
300165	47	405	250	3.68	43	16	32.68	273.38C
310165	48	382	271	3.58	43	17	31.78	279.510
10265	47	370	381	3.52	43	16	31.31	38C.82C
20265	45	369	388	3.51	42	16	31.27	386.560
30265	44	378	404	3.56	43	16	31.62	412.320
40265	43	388	402	3.60	43	15	32.03	421.140
50265	43	397	418	3.65	43	15	32.37	448.050
60265	45	406	433	3.69	43	16	32.72	474.650
70265	43	407	446	3.69	43	15	32.76	490.110
80265	42	405	466	3.68	43	15	32.68	509.570
90265	45	404	477	3.68	43	16	32.64	520.310
100265	45	402	481	3.67	43	16	32.57	522.08C
110265	45	404	500	3.68	43	16	32.64	545.400
120265	45	407	529	3.69	43	16	32.76	581.32C
130265	45	400	568	3.66	43	16	32.49	613.440
140265	45	396	606	3.64	43	16	32.34	647.94C
150265	45	419	649	3.75	43	16	33.21	734.210
160265	51	469	705	3.97	43	18	35.03	892.74C
180265	45	595	772	4.47	43	16	39.23	24C.220
170265	45	536	737	4.24	43	16	37.34	66.56C
190265	48	644	790	4.66	43	17	40.73	373.650
200265	49	685	802	4.80	43	17	41.95	483.300
210265	48	712	811	4.90	43	17	42.72	556.070
220265	47	744	795	5.01	43	16	43.62	597.00C
230265	48	767	779	5.09	43	17	44.25	613.230
240265	47	773	756	5.11	43	16	44.42	577.850
250265	46	770	725	5.10	43	16	44.33	507.280
260265	50	754	688	5.04	43	17	43.90	400.830
270265	47	735	644	4.98	43	16	43.37	278.020
280265	48	713	616	4.90	43	17	42.75	185.860
10365	47	700	550	4.86	43	16	42.37	39.500
20365	50	676	521	4.77	43	17	41.68	950.930
30365	48	640	494	4.64	43	17	40.61	853.630
40365	48	606	478	4.51	43	17	39.58	782.10C
50365	45	580	458	4.42	43	16	38.75	717.23C
60365	45	567	453	4.37	43	16	38.34	693.500
70365	46	559	444	4.32	43	16	38.09	670.130
80365	46	564	438	4.35	43	16	38.25	666.65C
90365	47	573	437	4.39	43	16	38.53	676.68C
100365	48	584	437	4.43	43	17	38.89	685.660
110365	48	598	439	4.48	43	17	39.33	708.810
120365	47	617	437	4.56	42	16	39.91	728.000
130365	47	635	433	4.67	43	16	40.46	742.390
140365	46	648	429	4.67	43	16	40.85	75C.56C
150365	47	657	424	4.70	43	16	41.12	753.91C
160365	48	664	415	4.73	43	17	41.33	742.22C
170365	50	667	405	4.74	43	17	41.42	729.360
180365	50	665	393	4.73	43	17	41.3C	715.630
190365	47	659	382	4.71	43	16	41.18	679.490
200365	45	651	375	4.68	42	16	40.54	656.14C
210365	46	645	373	4.66	43	16	40.76	649.580
220365	47	638	371	4.63	42	16	40.56	635.080
230365	50	629	369	4.55	43	17	40.15	622.650
240365	50	615	368	4.55	43	17	39.85	611.68C
250365	49	607	379	4.52	43	17	39.40	621.140
260365	49	607	388	4.52	43	17	39.40	635.65C
270365	48	613	411	4.54	43	17	39.79	680.250
280365	48	623	441	4.59	43	17	40.09	741.81C
290365	48	626	478	4.63	43	17	40.49	820.020
300365	51	660	530	4.71	43	18	41.21	844.46C
310365	47	677	582	4.77	43	16	41.72	83.84C
10465	50	682	620	4.77	43	17	41.86	141.670
20465	52	688	650	4.81	43	18	42.04	207.440
30465	51	698	673	4.88	43	18	42.32	266.34C
40465	49	712	696	4.90	43	17	42.72	327.690
50465	54	727	699	4.95	43	18	43.15	372.070
60465	55	742	666	5.00	43	18	43.57	334.26C
70465	54	756	640	5.05	43	18	43.95	306.370
80465	54	768	612	5.09	43	18	44.28	265.340
90465	55	779	585	5.13	43	18	44.58	230.430
100465	57	780	575	5.13	43	19	44.61	21C.55C
110465	58	780	558	5.13	43	19	44.61	175.150
120465	59	781	548	5.13	43	19	44.64	155.57C
130465	59	826	545	5.2E	43	19	45.84	215.460
140465	60	874	548	5.43	43	20	47.09	253.17C
150465	62	869	551	5.42	43	20	46.96	292.810
160465	59	864	539	5.40	43	19	46.83	257.38C
170465	60	883	560	5.4C	43	20	47.32	335.100
180465	61	900	577	5.51	43	20	47.75	462.11C
190465	61	917	580	5.57	43	20	48.17	436.020
200465	64	923	560	5.58	42	21	48.33	395.56C
210465	62	927	544	5.6C	43	20	48.42	361.580
220465	64	929	528	5.60	43	21	48.48	324.38C
230465	65	936	496	5.62	43	21	48.65	251.490
240465	65	930	490	5.61	43	21	48.49	230.39C

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	DIS CFS	SED PPM	VEL F/S	SLP F/S	SVEL F/S	DEP FT	TSED T/D
		1000		10-7 10-3				1000
250465	65	922	485	5.58	43	21	48.3C	207.360
260465	65	919	472	5.57	43	21	48.23	171.170
270465	65	918	439	5.57	43	21	48.20	88.110
280465	65	919	385	5.57	43	21	48.23	955.300
290465	64	886	276	5.47	43	21	47.35	660.250
300465	63	858	224	5.38	43	20	46.68	51E.52C
10565	63	860	239	5.39	43	20	46.73	554.960
20565	65	860	390	5.39	43	21	46.73	905.58C
30565	65	858	431	5.38	43	21	46.68	998.450
40565	65	844	390	5.34	43	21	46.31	888.73C
50565	65	828	308	5.29	43	21	45.89	688.560
60565	66	812	195	5.23	43	21	45.48	427.520
70565	67	800	164	5.19	43	21	45.16	354.240
80565	67	781	240	5.13	43	21	44.64	506.09C
90565	67	768	371	5.09	43	21	44.28	769.310
100565	67	749	416	5.02	43	21	43.77	841.280
110565	67	725	429	4.95	43	21	43.11	84C.930
120565	67	704	455	4.87	43	21	42.49	864.86C
130565	67	676	482	4.77	43	21	41.68	879.750
140565	69	653	509	4.69	43	22	41.00	897.420
150565	69	633	540	4.62	42	22	40.40	922.910
160565	65	617	560	4.56	43	21	39.91	932.900
170565	71	601	589	4.50	43	22	39.41	955.770
180565	71	582	596	4.42	43	22	38.83	936.550
190565	72	564	597	4.35	42	22	38.25	909.110
200565	73	550	583	4.3C	43	23	37.79	86E.76C
210565	73	531	565	4.22	42	23	37.17	810.040
220565	73	513	553	4.15	43	23	36.56	765.960
230565	73	500	538	4.10	43	23	36.12	726.300
240565	74	483	533	4.03	43	23	35.53	695.09C
250565	75	471	524	3.98	43	24	35.10	666.370
260565	75	457	515	3.92	43	24	34.60	635.460
270565	75	442	508	3.85	43	24	34.07	606.250
280565	76	432	491	3.81	43	24	33.69	572.70C
290565	75	417	480	3.74	43	24	33.13	540.430
300565	75	402	468	3.67	43	24	32.57	507.970
310565	75	388	448	3.60	43	24	32.03	469.320
10665	77	378	441	3.56	43	24	31.62	450.080
20665	78	373						

MISSISSIPPI RIVER AT TARBERT LANDING								
DATE	TM	D15	SED	VEL	SLP	SVEL	DEP	TSED
		F	PPM	F/S		F/S	FT	T/D
		1000		10-7		10-3		1000
70865	84	252	565	2.90	43	26	26.09	384.43C
80865	83	231	542	2.77	43	25	25.04	338.050
90865	83	215	526	2.68	43	25	24.19	305.340
100865	80	201	512	2.59	43	25	22.43	277.860
110865	82	192	496	2.53	43	25	22.92	257.13C
120865	82	189	486	2.51	43	25	22.75	248.010
130865	80	189	472	2.51	43	25	22.75	240.860
140865	81	191	450	2.52	43	25	22.87	232.070
150865	81	191	418	2.52	43	25	22.87	215.56C
160865	81	191	407	2.52	43	25	22.87	209.890
170865	80	186	386	2.49	43	25	22.58	193.850
180865	80	180	354	2.45	43	25	22.23	172.040
190865	81	181	323	2.45	43	25	22.30	157.65C
200865	81	183	293	2.47	43	25	22.41	144.770
210865	82	181	272	2.45	43	25	22.30	132.930
220865	83	179	252	2.44	43	25	22.18	121.790
230865	83	176	240	2.42	43	25	22.00	114.05C
240865	83	178	230	2.43	43	25	22.12	110.540
250865	83	181	223	2.45	43	25	22.30	102.969
260865	83	179	211	2.44	43	25	22.18	101.98C
270865	83	176	199	2.42	43	25	22.00	94.560
280865	83	175	176	2.41	43	25	21.94	83.16C
290865	82	174	122	2.40	43	25	21.89	57.32C
300865	83	173	95	2.40	43	25	21.82	44.370
310865	82	173	75	2.40	43	25	21.82	35.030
10965	83	170	79	2.38	43	25	21.64	36.26C
20965	83	168	87	2.36	43	25	21.52	35.46C
30965	83	168	97	2.36	43	25	21.52	44.00C
40965	83	171	107	2.36	43	25	21.70	45.40C
50965	82	176	119	2.42	43	25	22.00	56.590
60965	83	181	140	2.45	43	25	22.30	68.420
70965	83	186	150	2.49	43	25	22.58	75.310
80965	82	194	178	2.54	43	25	23.04	93.24C
90965	79	200	182	2.58	43	25	23.38	96.280
100965	82	203	193	2.60	43	25	23.54	105.780
110965	80	206	204	2.62	43	25	23.70	113.460
120965	80	210	215	2.64	43	25	23.93	121.91C
130965	79	218	226	2.69	43	25	24.36	133.02C
140965	79	229	237	2.76	43	25	24.93	146.540
150965	79	236	249	2.80	43	25	25.29	156.66C
160965	79	242	262	2.84	43	25	25.59	171.15C
170965	79	254	274	2.91	43	25	26.19	187.91C
180965	80	269	286	3.00	43	25	26.90	214.980
190965	80	286	320	3.09	43	25	27.70	247.100
200965	80	297	348	3.15	43	25	28.20	277.46C
210965	79	303	382	3.18	43	25	28.48	312.51C
220965	78	305	406	3.19	43	24	28.57	334.340
230965	78	306	434	3.20	43	24	28.60	358.570
240965	78	308	460	3.21	43	24	28.69	382.54C
250965	78	310	495	3.22	43	24	28.78	414.32C
260965	77	316	530	3.25	43	24	29.05	452.200
270965	77	323	565	3.27	43	24	29.35	492.740
280965	75	331	608	3.33	43	24	29.69	543.370
290965	74	342	619	3.38	43	23	30.16	571.58C
300965	75	364	650	3.49	43	24	31.07	638.820
11065	76	389	670	3.61	43	24	32.06	703.70C
21065	75	420	711	3.75	43	24	33.25	805.710
31065	75	442	692	3.85	43	24	34.07	825.240
41065	75	460	661	3.92	43	24	34.72	820.340
51065	69	482	564	4.02	43	22	35.50	733.59C
61065	67	495	497	4.08	43	21	35.94	664.240
71065	67	490	445	4.06	43	21	35.77	588.740
81065	58	471	420	3.98	43	22	35.10	534.110
91065	66	449	435	3.88	43	21	34.32	527.350
101065	65	423	454	3.77	43	21	33.36	518.510
111065	65	396	460	3.64	43	21	32.34	491.830
121065	65	381	467	3.57	43	21	31.75	480.400
131065	65	373	475	3.53	43	21	31.43	476.370
141065	65	361	485	3.46	43	21	30.94	472.730
151065	66	352	490	3.43	43	21	30.58	465.700
161065	66	348	495	3.41	43	21	30.41	465.100
171065	65	342	495	3.38	43	21	30.16	457.080
181065	65	336	495	3.35	43	21	29.91	449.060
191065	65	322	490	3.28	43	21	29.31	426.010
201065	64	306	481	3.20	43	21	28.60	397.400
211065	65	288	455	3.10	43	21	27.80	353.810
221065	64	272	443	3.01	43	21	27.05	325.340
231065	64	267	429	2.98	43	21	26.82	309.270
241065	65	265	417	2.97	43	21	26.72	298.360
251065	63	265	400	2.97	43	20	26.72	286.20C
261065	65	261	384	2.95	43	21	26.53	270.600
271065	63	259	368	2.94	43	20	26.43	257.340
281065	67	258	352	2.92	43	21	26.39	245.200
291065	67	256	343	2.92	43	21	26.29	237.080
301065	65	254	334	2.91	43	21	26.19	229.060
311065	64	252	324	2.90	43	21	26.09	220.450
11165	64	248	320	2.88	43	21	25.88	214.270
21165	64	244	310	2.85	43	21	25.69	204.230
31165	64	240	305	2.83	43	21	25.49	197.640
41165	64	237	264	2.81	43	21	25.34	168.930
51165	64	234	235	2.79	43	21	25.19	160.470
61165	64	233	214	2.79	43	21	25.13	134.630
71165	64	230	192	2.77	43	21	24.98	119.230
81165	64	228	170	2.76	43	21	24.87	104.65C
91165	64	225	147	2.74	43	21	24.72	87.300
101165	64	221	140	2.71	43	21	24.51	67.540
111165	63	216	140	2.68	43	20	24.25	81.650
121165	65	213	149	2.66	43	21	24.09	85.69C
131165	64	209	153	2.64	43	21	23.87	86.340
141165	67	206	159	2.62	43	21	23.70	88.440
151165	65	203	169	2.60	43	21	23.54	92.900
161165	67	202	175	2.59	43	21	23.49	95.450
171165	67	202	183	2.59	43	21	23.49	99.810
181165	66	199	182	2.57	43	21	23.32	97.790

MISSISSIPPI RIVER AT TARBERT LANDING								
DATE	TM	C15	SED	VEL	SLP	SVEL	DEP	TSED
		F	PPM	F/S		F/S	FT	T/D
		1000		10-7		10-3		1000
191165	68	199	173	2.57	43	22	23.32	92.950
201165	68	198	170	2.57	43	22	23.26	90.880
211165	61	198	162	2.57	43	20	23.26	86.610
221165	55	198	159	2.57	43	18	23.26	85.000
231165	68	197	172	2.56	43	22	23.21	91.490
241165	65	197	172	2.56	43	21	23.21	91.490
251165	60	201	179	2.59	43	20	23.43	97.140
261165	57	206	182	2.62	43	19	23.70	101.230
271165	57	211	191	2.65	43	19	23.98	108.61C
281165	57	217	198	2.69	43	19	24.30	116.01C
291165	56	223	207	2.73	43	19	24.61	124.630
301165	53	232	216	2.78	43	18	25.08	135.300
11265	53	236	217	2.80	43	18	25.29	138.270
21265	49	231	220	2.77	43	17	25.04	137.210
31265	53	228	218	2.76	43	18	24.87	134.200
41265	54	225	212	2.74	43	18	24.72	128.790
51265	53	223	204	2.73	43	18	24.61	122.830
61265	50	223	196	2.73	43	17	24.61	118.010
71265	50	220	194	2.71	43	17	24.45	115.240
81265	52	218	188	2.69	43	18	24.36	110.660
91265	51	216	187	2.68	43	18	24.25	105.060
101265	50	228	185	2.76	43	17	24.87	113.89C
111265	50	216	181	2.68	43	17	24.25	105.560
121265	50	218	177	2.69	43	17	24.36	104.180
131265	50	217	173	2.69	43	17	24.30	101.360
141265	49	207	170	2.62	43	17	23.77	95.010
151265	50	197	172	2.56	43	17	23.21	91.490
161265	49	197	172	2.56	43	17	23.21	91.490
171265	50	198	171	2.57	43	17	23.26	91.420
181265	47	205	170	2.61	43	16	23.65	94.100
191265	47	212	169	2.66	43	16	24.03	96.740
201265	50	211	174	2.65	43	17	23.58	99.130
211265	49	218	179	2.69	43	17	24.36	105.360
221265	50	216	179	2.66	43	17	24.25	104.390
231265	49	215	184	2.68	43	17	24.19	106.810
241265	50	217	184	2.69	43	17	24.30	107.810
251265	51	220	184	2.71	43	18	24.45	109.300
261265	55	223	189	2.73	4			

MISSISSIPPI RIVER AT TARBERT LANDING								
DATE	TM	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
	F	CFS	FFM	F/S	F/S	F/S	FT	T/D
		1000		10-7	10-3			1000
30366	43	111	460	2.34	43	15	17.02	379.860
40366	44	79	449	2.06	43	16	14.38	108.070
50366	44	68	405	1.94	43	16	13.41	167.860
60366	45	44	380	1.65	43	16	10.80	71.14C
70366	48	1	360	0.39	43	17	1.70	972.970
80366	47	937	360	5.27	43	16	48.30	910.760
90366	46	857	370	5.09	43	16	46.28	856.140
100366	46	792	375	4.94	43	16	44.52	801.9CC
110366	47	743	370	4.82	43	16	43.16	742.26C
120366	47	701	370	4.72	43	16	41.90	700.300
130366	46	707	365	4.73	43	16	42.13	696.750
140366	48	700	356	4.72	43	17	41.85	672.840
150366	48	675	315	4.65	43	17	41.16	574.09C
160366	48	653	297	4.59	43	17	40.51	522.640
170366	48	632	289	4.54	43	17	39.81	493.150
180366	51	517	286	4.20	43	18	36.14	399.230
190366	52	503	850	4.16	43	18	35.63	387.060
203366	51	469	280	4.05	43	18	34.43	354.560
210366	54	439	275	3.95	43	18	33.33	325.960
220366	52	430	290	3.92	43	18	32.99	336.690
230366	55	417	309	3.87	43	18	32.53	347.9CC
240366	47	411	321	3.85	43	16	32.29	367.310
250366	54	402	347	3.82	43	18	31.93	376.630
260366	55	397	358	3.80	43	18	31.75	383.740
270366	49	397	375	3.80	43	17	31.75	401.960
280366	57	384	394	3.75	43	19	31.25	408.500
290366	57	374	410	3.72	43	19	30.79	414.020
300366	56	370	430	3.70	43	19	30.67	429.570
310366	56	335	445	3.56	43	19	29.23	426.530
10466	56	346	459	3.61	43	19	29.65	428.800
20466	57	332	370	3.55	43	19	29.09	331.670
30466	59	326	320	3.57	43	19	29.23	296.300
40466	58	336	317	3.57	43	19	29.23	287.580
50466	56	328	395	3.53	43	19	28.95	349.810
60466	55	320	415	3.50	43	18	28.57	358.560
70466	57	316	395	3.49	43	19	28.34	337.010
80466	57	313	370	3.47	43	19	28.27	312.690
90466	57	304	335	3.43	43	19	27.89	274.970
100466	56	294	320	3.39	43	19	27.41	254.020
110466	58	294	305	3.39	43	19	27.41	242.110
120466	57	295	305	3.40	43	19	27.41	242.930
130466	59	298	300	3.41	43	19	27.57	241.380
140466	59	306	300	3.44	43	19	27.56	247.860
150466	59	313	300	3.47	43	19	28.27	253.530
160466	59	308	300	3.45	43	19	28.04	249.480
170466	60	303	305	3.43	43	20	27.81	249.520
180466	60	308	305	3.45	43	20	28.04	253.640
190466	60	316	305	3.49	43	20	28.34	260.23C
200466	59	328	311	3.53	43	19	28.95	275.42C
210466	60	390	335	3.78	43	20	31.42	352.750
220466	60	377	375	3.73	43	20	30.92	381.710
230466	60	384	470	3.75	43	20	31.25	487.300
240466	60	405	556	3.83	43	20	32.05	607.990
250466	59	478	634	3.93	43	19	33.10	741.210
260466	61	478	684	4.08	43	20	34.75	882.770
270466	63	496	706	4.14	43	20	35.36	945.480
280466	65	526	724	4.23	43	21	36.42	28.220
290466	64	576	732	4.38	43	21	38.07	138.410
300466	64	508	741	4.17	43	21	35.85	16.360
10566	64	642	740	4.56	43	21	40.18	282.720
20566	65	654	751	4.60	43	21	40.48	326.120
30566	64	684	752	4.67	43	21	41.46	388.790
40566	65	696	743	4.71	43	21	41.73	396.25C
50566	64	718	725	4.76	43	21	42.43	424.870
60566	65	733	717	4.80	43	21	42.84	419.010
70566	65	745	710	4.83	43	21	43.18	428.170
80566	66	753	694	4.85	43	21	43.40	410.970
90566	66	764	668	4.88	43	21	43.68	377.950
100566	65	777	407	4.91	43	21	44.05	853.850
110566	65	779	540	4.91	43	21	44.15	135.780
120566	66	775	575	4.90	43	21	44.05	203.190
130566	67	778	573	4.91	43	21	44.10	203.640
140566	67	780	520	4.91	43	21	44.20	95.120
150566	68	787	465	4.93	43	22	44.37	988.08C
160566	69	790	417	4.94	43	22	44.42	889.460
170566	69	785	405	4.93	43	22	44.27	858.400
180566	69	782	385	4.92	43	22	44.21	812.890
190566	69	778	370	4.91	43	22	44.10	777.220
200566	69	768	355	4.88	43	22	43.88	736.130
210566	69	759	340	4.86	43	22	43.61	696.76C
220566	68	750	330	4.84	43	22	43.34	668.250
230566	69	737	318	4.81	43	22	42.95	632.79C
240566	70	730	306	4.79	43	22	42.77	603.130
250566	70	729	306	4.79	43	22	42.72	602.300
260566	69	721	307	4.77	43	22	42.49	597.640
270566	70	725	313	4.78	43	22	42.61	612.700
280566	70	718	320	4.76	43	22	42.43	620.350
290566	70	713	332	4.75	43	22	42.26	639.130
300566	70	703	344	4.72	43	22	42.01	652.950
310566	70	687	365	4.68	43	22	41.53	677.04C
10666	70	669	390	4.64	43	22	40.93	704.460
20666	70	646	410	4.57	43	22	40.31	715.12C
30666	71	612	430	4.48	43	22	39.23	710.530
40666	75	576	445	4.38	43	24	38.07	692.06C
50666	74	547	455	4.29	43	23	37.16	671.990
60666	75	516	455	4.20	43	24	36.08	633.510
70666	75	489	460	4.11	43	24	35.18	607.340
80666	75	448	454	3.98	43	24	33.67	547.160
90666	76	428	446	3.91	43	24	32.94	515.400
100666	76	394	422	3.79	43	24	31.62	448.520
110666	77	368	388	3.69	43	24	30.61	385.500
120666	77	342	369	3.59	43	24	29.52	340.730
130666	78	323	361	3.51	43	24	28.73	314.830
140666	77	316	359	3.49	43	24	28.34	306.300

MISSISSIPPI RIVER AT TARBERT LANDING								
DATE	TM	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
	F	CFS	FFM	F/S	F/S	F/S	FT	T/D
		1000		10-7	10-3			1000
150666	78	314	357	3.48	43	24	28.27	302.660
160666	78	303	356	3.43	43	24	27.81	291.24C
170666	78	299	354	3.41	43	24	27.65	285.760
180666	78	296	347	3.40	43	24	27.49	277.32C
190666	78	295	340	3.40	43	24	27.41	276.810
200666	79	302	324	3.43	43	25	27.73	264.15C
210666	78	304	299	3.43	43	24	27.89	245.420
220666	78	311	283	3.46	43	24	28.20	237.64C
230666	78	330	278	3.54	43	24	29.02	247.700
240666	78	345	276	3.60	43	24	29.66	257.05C
250666	79	354	280	3.64	43	25	30.00	267.620
260666	79	353	283	3.63	43	25	30.01	266.73C
270666	78	343	292	3.60	43	24	29.51	276.420
280666	78	325	305	3.52	43	24	28.80	267.64C
290666	78	310	308	3.46	43	24	28.12	257.800
300666	79	289	345	3.37	43	25	27.16	265.20C
10766	83	268	378	3.27	43	25	26.21	273.520
20766	83	248	401	3.18	43	25	25.20	269.59C
30766	83	235	419	3.11	43	25	24.59	265.660
40766	85	229	432	3.08	43	26	24.27	267.11C
50766	82	223	436	3.05	43	25	23.95	262.52C
60766	81	220	438	3.04	43	25	23.75	260.17C
70766	85	213	439	3.00	43	26	23.40	252.470
80766	86	206	438	2.96	43	26	23.04	243.620
90766	81	197	438	2.91	43	25	22.54	232.970
100766	84	206	438	2.96	43	26	23.04	246.62C
110766	85	207	432	2.97	43	26	23.06	241.440
120766	85	208	432	2.97	43	26	23.15	242.610
130766	85	205	427	2.96	43	26	22.94	236.340
140766	85	202	421	2.94	43	26	22.80	229.61C
150766	86	199	416	2.92	43	26	22.66	223.520
160766	86	193	406	2.89	43	26	22.29	211.570
170766	86	190	396	2.87	43	26	22.15	203.150
180766	86	186	386	2.85	43	26	21.89	191.25C
190766	86	192	375	2.88	43	26	22.27	194.400
200766	80	194	361	2.89	43	25	22.40	185.090
210766	86	202	336	2.94	43	26	22.80	183.25C
220766								



MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	D/S	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPH	F/S	F/S	F/S	FT	T/D	1000
		1000	10-7		10-3			1000

280966	75	162	129	2.70	43	24	20.49	563.420
290966	75	164	130	2.72	43	24	20.56	573.560
300966	74	168	130	2.74	43	23	20.84	583.970
11066	74	166	132	2.73	43	23	20.70	59.160
21066	73	167	132	2.73	43	23	20.81	59.520
31066	72	166	126	2.73	43	23	20.70	56.470
41066	71	162	120	2.70	43	22	20.49	52.490
51066	71	160	120	2.69	43	22	20.35	51.840
61066	69	162	114	2.70	43	22	20.49	49.860
71066	69	166	116	2.73	43	22	20.70	51.540
81066	68	168	118	2.74	43	22	20.84	53.520
91066	68	168	118	2.74	43	22	20.84	53.520
101066	69	166	117	2.73	43	22	20.70	52.440
111066	69	165	117	2.72	43	22	20.67	52.120
121066	69	168	117	2.74	43	22	20.84	53.070
131066	69	166	117	2.73	43	22	20.70	52.440
141066	69	169	122	2.75	43	22	20.87	55.670
151066	69	164	122	2.72	43	22	20.56	54.020
161066	69	161	122	2.70	43	22	20.38	53.030
171066	68	161	123	2.70	43	22	20.38	52.470
181066	68	159	123	2.68	43	22	20.31	52.800
191066	68	160	123	2.69	43	22	20.35	53.140
201066	68	159	124	2.68	43	22	20.31	53.230
211066	67	159	123	2.68	43	21	20.31	52.800
221066	65	158	124	2.68	43	21	20.20	52.900
231066	65	159	124	2.68	43	21	20.31	53.230
241066	65	159	125	2.68	43	21	20.31	53.660
251066	63	162	125	2.70	43	20	20.49	54.670
261066	63	165	121	2.72	43	20	20.67	53.910
271066	65	170	120	2.75	43	21	20.98	55.080
281066	63	176	124	2.79	43	20	21.31	58.920
291066	63	182	128	2.83	43	20	21.63	62.900
301066	62	184	132	2.84	43	20	21.76	65.580
311066	62	185	133	2.84	43	20	21.87	66.430
11166	63	181	139	2.82	43	20	21.61	67.930
21166	61	175	139	2.78	43	20	21.29	65.680
31166	65	170	138	2.75	43	21	20.98	63.340
41166	61	167	136	2.73	43	20	20.81	61.320
51166	61	166	137	2.72	43	20	20.70	61.400
61166	61	165	135	2.72	43	20	20.67	60.140
71166	62	163	134	2.71	43	20	20.53	58.970
81166	62	158	133	2.68	43	20	20.20	56.740
91166	62	155	133	2.66	43	20	20.02	55.660
101166	62	161	134	2.70	43	20	20.38	58.250
111166	64	177	137	2.80	43	21	21.34	65.470
121166	64	186	136	2.85	43	21	21.89	68.300
131166	63	182	139	2.83	43	20	21.63	68.300
141166	62	189	143	2.87	43	20	22.04	72.970
151166	63	194	147	2.92	43	20	22.66	78.980
161166	63	203	152	2.95	43	20	22.82	83.310
171166	63	210	160	2.98	43	20	23.27	90.720
181166	63	213	174	3.00	43	20	23.40	100.070
191166	63	222	220	3.05	43	20	23.86	131.870
201166	61	229	278	3.08	43	20	24.27	171.690
211166	63	236	294	3.12	43	20	24.60	187.340
221166	63	244	306	3.16	43	20	25.00	210.590
231166	62	250	296	3.19	43	20	25.29	155.800
241166	62	257	278	3.22	43	20	25.67	192.900
251166	60	252	249	3.20	43	20	25.35	169.420
261166	62	246	214	3.17	43	20	25.10	142.140
271166	60	235	184	3.11	43	20	24.59	116.750
281166	58	220	157	3.04	43	19	23.75	93.260
291166	58	205	144	2.96	43	19	22.54	79.700
301166	57	208	138	2.97	43	19	23.15	77.500
11266	57	208	127	2.97	43	19	23.15	71.320
21266	52	201	125	2.93	43	18	22.78	67.840
31266	53	196	123	2.91	43	18	22.44	65.070
41266	55	192	126	2.88	43	18	22.27	65.320
51266	53	189	130	2.87	43	18	22.04	66.340
61266	52	188	132	2.86	43	18	22.02	67.000
71266	53	191	135	2.88	43	18	22.17	69.620
81266	54	198	139	2.92	43	18	22.56	74.310
91266	54	211	144	2.99	43	18	23.29	82.040
101266	54	220	150	3.04	43	18	23.75	89.100
111266	53	230	161	3.09	43	18	24.25	99.990
121266	53	228	172	3.08	43	18	24.18	105.880
131266	52	234	183	3.11	43	18	24.50	115.620
141266	53	238	199	3.13	43	18	24.70	127.860
151266	55	249	224	3.18	43	18	25.25	150.660
161266	51	271	265	3.29	43	18	26.31	193.900
171266	52	320	317	3.53	43	18	28.95	280.740
181266	51	387	377	3.76	43	18	31.38	393.630
191266	50	419	423	3.88	43	17	32.58	478.540
201266	49	451	465	3.99	43	17	32.78	566.230
211266	48	460	507	4.02	43	17	34.11	625.650
221266	50	474	528	4.07	43	17	34.58	675.720
231266	49	480	530	4.09	43	17	34.79	686.880
241266	48	485	538	4.10	43	17	35.02	704.510
251266	48	489	546	4.11	43	17	35.18	720.660
261266	49	490	543	4.12	43	17	35.16	712.390
271266	47	484	540	4.10	43	16	34.56	705.670
281266	49	473	530	4.06	43	17	34.60	678.800
291266	48	457	520	4.01	43	17	34.00	641.630
301266	53	449	515	3.98	43	18	33.73	624.230
311266	50	419	490	3.88	43	17	32.58	554.340
10167	44	397	475	3.68	43	16	32.30	505.150
20167	43	396	456	3.68	43	15	32.23	487.560
30167	44	396	465	3.68	43	16	32.23	497.180
40167	43	378	445	3.60	43	15	31.69	454.170
50167	43	366	429	3.55	43	15	31.29	423.940
60167	43	364	405	3.54	43	15	31.23	398.020
70167	43	365	379	3.55	43	15	31.21	371.500
80167	43	363	375	3.54	43	15	31.16	348.530
90167	43	360	275	3.52	43	15	31.12	267.300

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	D/S	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPH	PPM	F/S	F/S	F/S	FT	T/D
		1000	10-7		10-3			1000

100167	42	355	240	3.50	43	15	30.94	230.040
110167	41	348	208	3.47	43	15	30.69	195.440
120167	41	335	187	3.41	43	15	30.26	165.140
130167	44	323	172	3.36	43	16	29.75	150.000
140167	45	312	173	3.31	43	16	29.38	145.740
150167	45	299	180	3.24	43	16	28.97	145.310
160167	43	265	189	3.18	43	15	28.36	145.440
170167	43	269	192	3.10	43	15	27.72	139.450
180167	42	255	194	3.02	43	15	27.22	133.570
190167	42	245	195	2.97	43	15	26.77	128.990
200167	42	237	197	2.93	43	15	26.39	126.000
210167	43	231	194	2.85	43	15	26.20	121.000
220167	43	224	188	2.85	43	15	25.89	113.700
230167	44	218	182	2.82	43	16	25.58	107.130
240167	46	213	176	2.79	43	16	25.36	101.220
250167	45	211	176	2.78	43	16	25.25	100.270
260167	47	209	170	2.77	43	16	25.14	95.930
270167	46	205	163	2.74	43	16	25.01	90.220
280167	47	201	156	2.72	43	16	24.79	84.660
290167	47	197	149	2.70	43	16	24.56	79.250
300167	48	194	142	2.68	43	17	24.43	74.380
310167	47	191	139	2.66	43	16	24.29	71.680
10267	48	192	137	2.66	43	17	24.40	71.020
20267	48	195	137	2.68	43	17	24.53	72.130
30267	50	205	150	2.74	43	17	25.01	83.020
40267	52	219	174	2.83	43	18	25.59	102.890
50267	50	237	210	2.93	43	17	26.39	134.380
60267	48	257	256	3.03	43	17	27.31	177.640
70267	50	278	300	3.14	43	17	28.13	225.180
80267	47	291	336	3.21	43	16	28.58	264.000
90267	49	305	387	3.27	43	17	29.18	318.690
100267	48	318	419	3.33	43	17	29.67	359.750
110267	47	328	435	3.38	43	16	29.99	385.240
120267	46	336	440	3.42	43	16	30.24	399.170
130267	46	340	447	3.44	43	16	30.36	410.350
140267	45	334	435	3.41	43	16	30.18	392.280
150267	46	327	440	3.38	43	16	29.92	386.480
160267	4							

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSEC	
F	F	CFS	PPH	F/S	10-7	F/S	FT	T/D	
		1000			10-3			1000	
240467	69	465	274	3.99	43	22	24.32	344.410	
250467	69	470	274	3.97	43	22	24.45	347.710	
260467	69	475	269	3.99	43	22	24.59	344.450	
270467	67	479	261	4.00	43	21	24.74	337.550	
280467	67	476	244	3.99	43	21	24.45	313.490	
290467	65	471	234	3.97	43	21	24.52	297.580	
300467	67	464	219	3.94	43	21	24.35	274.360	
10567	67	460	209	3.93	43	21	24.19	259.280	
20567	66	470	200	3.97	43	21	24.45	253.800	
30567	65	469	196	3.96	43	21	24.48	248.190	
40567	65	480	197	4.00	43	21	24.80	255.310	
50567	61	514	204	4.13	43	20	25.68	243.110	
60567	61	535	221	4.20	43	20	26.28	215.230	
70567	65	559	237	4.28	43	21	26.93	257.700	
80567	64	587	247	4.38	43	21	27.58	391.470	
90567	66	591	258	4.39	43	21	27.71	411.650	
100567	67	591	263	4.39	43	21	27.71	415.670	
110567	67	590	268	4.39	43	21	27.66	422.920	
120567	67	593	263	4.40	43	21	27.73	421.090	
130567	68	594	258	4.40	43	22	27.78	413.780	
140567	68	593	243	4.40	43	22	27.73	385.070	
150567	68	597	228	4.41	43	22	27.86	367.510	
160567	65	602	214	4.43	43	21	27.95	347.840	
170567	64	606	205	4.44	43	21	28.07	335.420	
180567	66	614	202	4.47	43	21	28.23	334.480	
190567	68	625	213	4.50	43	22	28.54	359.440	
200567	67	639	234	4.55	43	21	28.83	403.720	
210567	67	661	258	4.62	43	21	29.33	460.450	
220567	70	690	280	4.71	43	22	29.99	521.640	
230567	69	704	307	4.75	43	22	40.32	583.450	
240567	67	719	324	4.79	43	21	40.69	628.980	
250567	60	730	339	4.82	43	20	40.95	646.170	
260567	62	743	351	4.86	43	20	41.22	704.140	
270567	65	756	351	4.90	43	21	41.47	728.910	
280567	67	764	368	4.92	43	21	41.67	759.110	
290567	68	773	373	4.95	43	22	41.82	776.490	
300567	61	779	379	4.97	43	20	41.92	797.150	
310567	61	783	380	4.96	43	20	42.02	802.360	
10667	65	791	380	5.00	43	21	42.21	811.570	
20667	63	803	379	5.03	43	20	42.48	821.710	
30667	65	797	378	5.02	43	21	42.30	813.420	
40667	65	783	377	4.98	43	21	42.02	797.020	
50667	64	767	371	4.93	43	21	41.72	768.300	
60667	64	739	369	4.85	43	21	41.12	736.270	
70667	67	704	363	4.75	43	21	40.32	685.990	
80667	66	658	356	4.61	43	21	39.27	632.470	
90667	65	605	348	4.44	43	21	38.02	568.460	
100667	66	548	341	4.25	43	21	36.58	504.540	
110667	67	501	332	4.06	43	21	35.34	445.100	
120667	68	463	319	3.94	43	22	34.29	396.790	
130667	69	448	311	3.88	43	22	33.68	376.190	
140667	70	435	308	3.83	43	22	33.49	361.750	
150667	72	422	306	3.78	43	23	33.08	348.660	
160667	73	397	302	3.68	43	23	32.30	323.710	
170667	73	380	308	3.61	43	23	31.74	316.010	
180667	73	362	316	3.53	43	23	31.18	308.860	
190667	72	348	329	3.47	43	23	30.69	309.130	
200667	72	344	353	3.45	43	23	30.57	327.870	
210667	73	345	382	3.46	43	23	30.56	355.830	
220667	73	356	426	3.51	43	23	30.92	409.470	
230667	73	369	456	3.56	43	23	31.41	454.310	
240667	74	386	497	3.63	43	23	31.98	517.970	
250667	74	403	517	3.70	43	23	32.53	528.550	
260667	74	417	555	3.76	43	23	32.93	624.870	
270667	74	422	582	3.78	43	23	33.08	663.130	
280667	74	424	598	3.79	43	23	33.12	684.590	
290667	74	423	624	3.79	43	23	33.06	712.670	
300667	75	431	624	3.82	43	24	33.32	726.150	
10767	81	439	619	3.85	43	25	33.57	733.760	
20767	82	450	608	3.89	43	25	33.91	738.720	
30767	73	461	593	3.93	43	23	34.25	736.110	
40767	73	471	582	3.97	43	23	34.52	740.130	
50767	74	482	560	4.01	43	23	34.84	728.780	
60767	74	494	543	4.06	43	23	35.12	724.250	
70767	73	511	526	4.12	43	23	35.60	725.720	
80767	73	521	503	4.15	43	23	35.91	707.570	
90767	73	532	481	4.19	43	23	36.20	690.910	
100767	73	538	464	4.21	43	23	36.36	674.010	
110767	74	545	443	4.24	43	23	36.49	651.870	
120767	74	549	417	4.25	43	23	36.58	616.990	
130767	70	548	389	4.25	43	22	36.58	575.560	
140767	70	553	367	4.26	43	22	36.77	547.970	
150767	78	551	347	4.26	43	24	36.66	516.230	
160767	78	546	322	4.24	43	24	36.55	474.690	
170767	78	543	296	4.22	43	24	36.47	433.970	
180767	79	535	266	4.20	43	25	36.28	384.240	
190767	80	529	251	4.18	43	25	36.11	358.500	
200767	80	526	236	4.17	43	25	36.03	335.170	
210767	80	518	220	4.14	43	25	35.83	307.690	
220767	81	506	216	4.10	43	25	35.48	295.100	
230767	82	486	217	4.03	43	25	34.90	284.750	
240767	82	463	212	3.94	43	25	34.29	265.020	
250767	82	435	212	3.83	43	25	33.49	246.990	
260767	82	404	213	3.71	43	25	32.50	232.740	
270767	82	371	213	3.57	43	25	31.46	213.360	
280767	82	342	219	3.44	43	25	30.51	202.220	
290767	82	319	219	3.34	43	25	29.66	188.620	
300767	82	306	225	3.28	43	25	29.17	185.890	
310767	82	299	226	3.28	43	25	29.10	182.450	
10867	82	294	232	3.27	43	25	28.74	184.160	
20867	82	295	238	3.22	43	25	28.73	185.970	
30867	83	297	247	3.24	43	25	28.97	194.400	
40867	83	305	256	3.27	43	25	29.18	210.820	
50867	83	315	268	3.30	43	25	29.52	227.930	

MISSISSIPPI RIVER AT TARBERT LANDING									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSEC	
F	F	CFS	PPH	F/S	10-7	F/S	FT	T/D	
		1000			10-3			1000	
60867	84	332	294	3.40	43	26	30.12	263.540	
70867	84	349	347	3.48	43	26	30.68	326.980	
80867	85	357	400	3.51	43	25	30.99	365.560	
90867	84	360	458	3.52	43	26	31.12	445.180	
100867	84	362	490	3.53	43	26	31.18	478.930	
110867	83	358	499	3.51	43	25	31.07	482.330	
120867	83	346	485	3.46	43	25	30.63	453.090	
130867	84	333	455	3.40	43	26	30.19	409.090	
140867	84	318	335	3.33	43	26	29.67	287.630	
150867	84	310	249	3.30	43	26	29.31	208.410	
160867	84	304	222	3.27	43	26	29.10	182.220	
170867	82	301	209	3.25	43	25	29.04	169.850	
180867	81	290	212	3.20	43	25	28.59	166.000	
190867	81	277	219	3.14	43	25	28.05	163.790	
200867	81	264	236	3.07	43	25	27.56	166.220	
210867	80	251	285	3.00	43	25	27.04	193.140	
220867	80	244	310	2.96	43	25	26.77	204.230	
230867	81	236	330	2.92	43	25	26.39	210.280	
240867	80	230	350	2.89	43	25	26.10	217.350	
250867	80	223	365	2.85	43	25	25.79	219.770	
260867	80	223	375	2.85	43	25	25.79	225.790	
270867	80	226	394	2.87	43	25	25.90	240.420	
280867	80	229	407	2.88	43	25	26.10	251.650	
290867	79	222	415	2.84	43	25	25.79	248.750	
300867	79	220	424	2.83	43	25	25.69	251.860	
310867	78	219	420	2.83	43	24	25.59	248.350	
10967	79	215	410	2.80	43	25	25.47	236.000	
20967	79	214	397	2.80	43	25	25.37	229.390	
30967	78	213	366	2.79	43	24	25.36	210.490	
40967	77	213	338	2.79	43	24	25.36	194.380	
50967	78	2							

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TN	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPH	F/S	F/S	F/S	FT	FT	T/D
		1000	10-7 10-3				1000	1000
141167	54	304	301	3.29	43	18	25.32	251.120
201167	54	294	297	3.22	43	18	28.74	235.760
211167	54	284	291	3.17	43	18	28.36	223.140
221167	54	274	285	3.12	43	18	27.97	210.240
231167	54	271	282	3.11	43	18	27.80	206.340
241167	54	265	277	3.08	43	18	27.56	198.190
251167	54	259	273	3.04	43	18	27.39	190.510
261167	54	256	270	3.03	43	18	27.22	186.620
271167	55	251	268	3.00	43	18	27.04	181.620
281167	54	244	265	2.96	43	18	26.77	174.560
291167	54	240	263	2.94	43	18	26.58	170.420
301167	54	238	259	2.93	43	18	26.49	166.430
11267	54	239	251	2.94	43	18	26.49	161.970
12267	54	243	257	2.96	43	18	26.68	158.820
31267	52	247	264	2.98	43	18	26.86	176.060
41267	50	251	272	3.00	43	17	27.04	184.330
51267	51	259	287	3.04	43	18	27.39	200.700
61267	51	270	310	3.10	43	18	27.81	225.990
71267	50	286	345	3.18	43	17	28.44	266.410
81267	50	304	383	3.27	43	17	29.10	314.370
91267	50	332	432	3.40	43	17	30.12	379.180
101267	50	362	477	3.53	43	18	31.18	466.220
111267	50	399	518	3.69	43	17	32.34	558.040
121267	49	427	559	3.80	43	17	33.23	644.470
131267	48	451	595	3.89	43	17	33.98	724.530
141267	48	478	615	4.00	43	17	34.68	793.720
151267	50	499	608	4.07	43	17	35.33	819.160
161267	50	509	597	4.11	43	17	35.57	820.460
171267	50	517	575	4.14	43	17	35.77	802.640
181267	50	488	546	4.04	43	17	35.16	794.550
191267	50	556	515	4.27	43	17	36.85	773.120
201267	49	575	481	4.34	43	17	37.28	746.750
211267	49	595	441	4.41	43	17	37.75	708.470
221267	49	618	402	4.48	43	17	38.35	680.790
231267	49	642	373	4.56	43	17	38.89	646.560
241267	48	650	341	4.58	43	17	39.13	598.450
251267	48	656	320	4.60	43	17	39.25	566.780
261267	48	670	307	4.64	43	17	39.61	555.360
271267	47	675	296	4.66	43	16	39.68	539.460
281267	46	675	289	4.66	43	16	39.68	526.700
291267	46	677	285	4.67	43	16	39.69	520.950
301267	44	675	287	4.66	43	16	39.68	523.060
311267	44	669	294	4.64	43	16	39.56	531.050
10168	44	719	305	5.01	43	16	39.32	592.100
20168	44	723	320	5.02	43	16	39.43	624.670
30168	42	723	332	5.02	43	15	39.43	648.100
40168	42	724	343	5.02	43	15	39.48	670.500
50168	42	721	351	5.01	43	15	39.42	683.290
60168	42	712	354	4.99	43	15	39.15	684.370
70168	42	702	358	4.96	43	15	38.92	676.550
80168	41	685	360	4.91	43	15	38.50	665.820
90168	40	673	358	4.88	43	14	38.15	650.520
100168	39	666	354	4.86	43	14	37.97	636.560
110168	38	648	351	4.81	43	14	37.48	614.110
120168	38	630	347	4.76	43	14	36.97	590.230
130168	38	626	336	4.75	43	14	36.85	567.510
140168	34	626	323	4.75	43	14	36.85	545.930
150168	35	631	300	4.76	43	13	37.02	511.110
160168	36	625	277	4.75	43	13	36.80	467.440
170168	36	623	252	4.74	43	13	36.78	423.890
180168	36	617	217	4.72	43	13	36.63	361.500
190168	36	618	186	4.73	43	13	36.60	310.360
200168	36	613	156	4.71	43	13	36.50	258.200
210168	36	610	136	4.70	43	13	36.43	223.690
220168	37	605	120	4.69	43	13	36.25	196.020
230168	38	561	114	4.62	43	14	35.55	178.830
240168	38	555	112	4.54	43	14	34.70	167.830
250168	38	542	106	4.50	43	14	34.39	155.120
260168	40	527	102	4.45	43	14	33.95	145.140
270168	40	510	100	4.35	43	14	33.47	137.700
280168	40	493	97	4.34	42	14	32.89	129.120
290168	40	47	95	1.77	43	14	10.84	122.860
300168	41	466	95	4.24	43	15	32.09	119.530
310168	42	457	98	4.21	43	15	31.78	120.920
10268	42	455	169	4.21	43	15	31.66	207.420
20268	43	466	199	4.24	43	15	32.09	250.380
30268	44	467	242	4.25	43	16	32.07	305.140
40268	44	475	270	4.28	43	16	32.31	346.270
50268	44	482	291	4.30	43	16	32.56	378.710
60268	43	518	311	4.42	43	15	32.69	434.560
70268	44	560	326	4.55	43	16	34.98	492.910
80268	43	599	343	4.67	43	15	34.09	554.730
90268	43	619	345	4.73	43	15	36.65	576.600
100268	44	642	347	4.79	43	16	37.34	601.490
110268	44	666	350	4.86	43	16	37.97	629.370
120268	44	683	347	4.91	43	16	38.40	639.900
130268	42	699	340	4.95	43	15	38.85	641.680
140268	42	710	328	4.90	43	15	39.14	626.780
150268	42	719	316	5.01	43	15	39.32	613.450
160268	41	724	309	5.02	43	15	39.48	604.030
170268	41	726	298	5.02	43	15	39.57	584.140
180268	41	720	284	5.01	43	15	39.37	562.100
190268	41	614	267	4.71	43	15	36.55	442.630
200268	41	693	260	4.94	43	15	38.64	486.490
210268	40	665	253	4.86	43	14	37.92	454.260
220268	40	641	245	4.79	43	14	37.29	424.020
230268	40	613	241	4.71	42	14	36.50	298.880
240268	39	540	233	4.49	43	14	34.36	239.710
250268	39	526	228	4.38	43	14	33.32	211.450
260268	39	473	224	4.27	43	14	32.27	206.070
270268	39	447	222	4.18	43	14	31.41	267.900
10368	39	389	215	3.56	43	14	29.45	225.810
20368	40	367	214	3.88	43	14	28.59	212.050
30368	40	346	213	3.79	43	14	27.84	190.980

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TN	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPH	F/S	F/S	F/S	FT	FT	T/D
		1000	10-7 10-3				1000	1000
40368	40	328	212	3.71	43	14	27.17	187.750
50368	40	314	211	3.65	43	14	26.61	178.890
60368	41	301	209	3.59	43	15	26.09	169.850
70368	41	291	208	3.55	43	15	25.63	163.410
80368	41	279	205	3.49	43	15	25.16	154.430
90368	41	269	202	3.44	43	15	24.74	146.710
100368	44	259	195	3.39	43	16	24.31	136.360
110368	45	250	190	3.35	43	16	23.86	129.280
120368	46	247	188	3.33	43	16	23.76	125.340
130368	46	242	188	3.31	43	16	23.49	122.840
140368	45	240	190	3.30	43	16	23.39	232.120
150368	42	245	193	3.32	43	15	23.67	127.670
160368	45	253	225	3.36	43	16	24.04	153.700
170368	47	267	260	3.42	43	16	24.65	187.430
180368	48	281	301	3.50	43	17	25.24	228.370
190368	49	308	351	3.63	43	17	26.31	291.890
200368	50	338	417	3.76	43	17	27.50	366.550
210368	51	377	488	3.92	43	18	28.96	469.740
220368	50	434	564	4.13	43	17	31.00	606.900
230368	50	498	610	4.35	43	17	33.10	820.210
240368	50	567	641	4.57	43	17	35.20	981.310
250368	50	621	653	4.76	43	17	37.02	112.520
260368	48	674	656	4.88	43	17	38.20	153.790
270368	48	708	654	4.96	43	17	39.04	250.150
280368	49	736	640	5.05	43	17	36.80	271.810
290368	50	754	609	5.10	43	17	40.23	239.800
300368	50	771	581	5.14	43	17	40.88	205.470
310368	50	778	544	5.16	43	17	40.84	142.730
10468	50	786	530	5.18	43	17	41.04	124.770
20468	50	782	532	5.17	43	17	40.94	122.260
30468	51	777	528	5.16	43	18	40.76	107.690
40468	51	772	515	5.14	43	18	40.73	73.470
50468	53	768	503	5.13	43	18	40.63	43.020
60468	53	790	492	5.19	43	18	41.14	45.440
70468	54	809	482	5.22	43	18	41.66	52.830
80468	54	833	475	5.25	43	18	42.23	68.340
90468	54	840	453	5.31	43			

## MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F		CFS	PPH	F/S	F/S	F/S	FT	T/D
		1000		10-7 10-3			1000	
170668	75	779	221	5.16	4.3	24	40.86	464.830
180668	75	774	220	5.15	4.3	24	40.74	459.760
190668	76	761	226	5.11	4.3	24	40.47	464.360
200668	76	743	238	5.07	4.3	24	39.96	477.450
210668	75	717	251	5.00	4.3	24	39.31	485.610
220668	79	663	271	4.85	4.3	25	37.90	485.120
230668	79	591	295	4.65	4.3	25	35.83	470.730
240668	80	532	327	4.46	4.3	25	34.16	469.700
250668	80	488	364	4.32	4.3	25	32.76	475.610
260668	80	449	397	4.18	4.3	25	31.53	481.260
270668	80	415	433	4.06	4.3	25	30.35	485.180
280668	80	384	465	3.94	4.3	25	29.27	482.110
290668	80	362	493	3.86	4.3	25	28.41	481.860
300668	80	350	508	3.81	4.3	25	27.96	480.060
10768	80	345	526	3.79	4.3	25	27.77	489.570
20768	80	346	522	3.79	4.3	25	27.84	487.650
30768	80	347	514	3.79	4.3	25	27.91	481.570
40768	80	350	504	3.81	4.3	25	27.96	476.280
50768	80	352	488	3.81	4.3	25	28.10	463.800
60768	80	348	466	3.80	4.3	25	27.90	437.850
70768	80	343	445	3.78	4.3	25	27.70	412.110
80768	80	336	419	3.75	4.3	25	27.44	380.120
90768	80	329	394	3.72	4.3	25	27.17	349.590
100768	80	323	368	3.69	4.3	25	26.96	320.930
110768	80	322	336	3.69	4.3	25	26.89	292.120
120768	81	321	331	3.68	4.3	25	26.89	286.880
130768	81	320	324	3.68	4.3	25	26.82	279.940
140768	81	320	317	3.68	4.3	25	26.82	273.890
150768	81	319	317	3.67	4.3	25	26.82	273.030
160768	81	302	315	3.60	4.3	25	26.09	256.850
170768	81	288	314	3.53	4.3	25	25.55	244.170
180768	81	274	313	3.47	4.3	25	24.91	231.560
190768	82	275	315	3.46	4.3	25	24.99	233.890
200768	82	277	307	3.48	4.3	25	25.07	229.610
210768	83	277	300	3.48	4.3	25	25.07	224.370
220768	83	278	284	3.49	4.3	25	25.08	213.170
230768	83	282	270	3.45	4.3	25	25.24	205.580
240768	83	279	254	3.49	4.3	25	25.16	191.340
250768	83	277	247	3.48	4.3	25	25.07	184.730
260768	83	266	244	3.42	4.3	25	24.57	175.240
270768	83	257	248	3.38	4.3	25	24.22	172.090
280768	84	247	253	3.33	4.3	26	23.76	168.300
290768	85	242	255	3.31	4.3	26	23.49	166.620
300768	85	240	256	3.30	4.3	26	23.39	165.890
310768	85	237	256	3.28	4.3	26	23.29	163.810
10868	85	236	257	3.28	4.3	26	23.20	163.760
20868	86	237	251	3.28	4.3	26	23.29	160.610
30868	85	242	243	3.31	4.3	26	23.49	158.780
40868	85	250	238	3.35	4.3	26	23.86	156.650
50868	85	258	232	3.39	4.3	26	24.22	161.610
60868	85	269	229	3.44	4.3	26	24.74	166.320
70868	86	276	228	3.48	4.3	26	24.99	169.910
80868	86	281	228	3.50	4.3	26	25.24	172.980
90868	86	279	231	3.49	4.3	26	25.16	174.010
100868	86	276	242	3.48	4.3	26	24.99	180.340
110868	86	275	263	3.47	4.3	26	24.95	195.280
120868	85	281	286	3.50	4.3	26	25.24	216.550
130868	86	287	315	3.53	4.3	26	25.48	244.090
140868	86	294	339	3.56	4.3	26	25.79	269.100
150868	84	300	360	3.59	4.3	26	26.02	291.600
160868	85	302	364	3.60	4.3	26	26.09	296.610
170868	84	300	363	3.59	4.3	26	26.02	294.030
180868	84	297	359	3.58	4.3	26	25.87	287.880
190868	84	294	354	3.56	4.3	26	25.79	281.010
200868	84	294	350	3.56	4.3	26	25.79	277.930
210868	85	295	349	3.57	4.3	26	25.79	277.980
220868	85	298	347	3.58	4.3	26	25.94	279.200
230868	85	302	364	3.60	4.3	26	26.09	296.610
240868	85	299	378	3.59	4.3	26	25.94	305.160
250868	85	292	386	3.55	4.3	26	25.71	304.320
260868	85	285	390	3.52	4.3	26	25.40	300.100
270868	85	272	390	3.46	4.3	26	24.83	286.420
280868	85	259	387	3.39	4.3	26	24.31	270.630
290868	85	250	378	3.35	4.3	26	23.86	255.150
300868	84	243	364	3.31	4.3	26	23.57	238.820
310868	84	237	345	3.28	4.3	26	23.29	220.770
10968	84	232	315	3.26	4.3	26	23.00	197.320
20968	84	224	271	3.21	4.3	26	22.67	163.900
30968	84	217	229	3.17	4.3	26	22.35	134.170
40968	82	207	206	3.12	4.3	25	21.81	115.130
50968	81	198	196	3.07	4.3	25	21.33	104.780
60968	81	189	191	3.01	4.3	25	20.92	97.470
70968	81	182	191	2.97	4.3	25	20.52	93.860
80968	81	178	192	2.94	4.3	25	20.35	92.280
90968	81	171	192	2.90	4.3	25	19.93	88.650
100968	80	167	192	2.87	4.3	25	19.74	86.570
110968	79	165	193	2.87	4.3	25	19.74	87.020
120968	79	161	195	2.86	4.3	25	19.60	86.670
130968	79	161	199	2.83	4.3	25	19.40	86.510
140968	79	160	203	2.83	4.3	25	19.29	87.700
150968	79	160	212	2.82	4.3	25	19.25	91.580
160968	79	161	220	2.83	4.3	25	19.40	95.610
170968	79	163	229	2.85	4.3	25	19.47	100.780
180968	79	167	241	2.87	4.3	25	19.74	108.270
190968	78	171	251	2.90	4.3	24	19.93	115.890
200968	78	175	264	2.92	4.3	24	20.19	132.420
210968	78	179	274	2.92	4.3	24	20.37	132.420
220968	78	183	284	2.97	4.3	24	20.62	132.420
230968	78	183	294	2.97	4.3	24	20.62	145.270
240968	78	182	304	2.97	4.3	24	20.52	149.360
250968	78	180	305	2.96	4.3	24	20.40	148.230
260968	78	179	301	2.95	4.3	24	20.37	145.470
270968	78	180	296	2.96	4.3	24	20.40	141.860
280968	76	180	292	2.96	4.3	24	20.40	141.910

## MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F		CFS	PPH	F/S	F/S	F/S	FT	T/D
		1000		10-7 10-3			1000	
290968	77	179	282	2.95	4.3	24	20.37	136.770
300968	77	179	274	2.95	4.3	24	20.37	132.420
11068	77	178	205	2.94	4.3	24	20.35	98.520
21068	77	181	202	2.96	4.3	24	20.50	98.720
31068	77	187	198	3.00	4.3	24	20.79	99.970
41068	75	191	194	3.02	4.3	24	21.04	100.050
51068	75	193	194	3.04	4.3	24	21.08	101.090
61068	76	196	192	3.05	4.3	24	21.29	101.610
71068	76	197	190	3.06	4.3	24	21.31	101.060
81068	76	196	190	3.05	4.3	24	21.29	100.550
91068	75	194	190	3.04	4.3	24	21.18	99.520
101068	73	194	188	3.04	4.3	23	21.18	98.470
111068	72	193	187	3.04	4.3	23	21.08	97.450
121068	72	191	187	3.02	4.3	23	21.04	96.440
131068	72	189	185	3.01	4.3	23	20.92	94.410
141068	72	189	186	3.01	4.3	23	20.92	94.520
151068	71	188	191	3.01	4.3	22	20.82	98.950
161068	72	187	193	3.00	4.3	23	20.79	97.450
171068	72	186	197	2.99	4.3	23	20.77	98.930
181068	72	187	200	3.00	4.3	23	20.79	100.980
191068	72	186	207	2.99	4.3	23	20.77	103.960
201068	71	185	212	2.99	4.3	22	20.67	105.690
21068	70	187	229	3.00	4.3	22	20.79	115.620
221068	70	192	237	3.03	4.3	22	21.06	122.860
231068	70	198	252	3.07	4.3	22	21.33	135.250
241068	69	206	269	3.11	4.3	22	21.79	149.620
251068	68	212	283	3.15	4.3	22	22.04	161.990
261068	68	215	298	3.16	4.3	22	22.24	172.940
271068	68	219	315	3.18	4.3	22	22.36	185.410
281068	68	221	329	3.20	4.3	22	22.48	196.310
291068	68	221	340	3.20	4.3	22	22.48	202.880
301068	68	224	352	3.21	4.3	22	22.67	212.890
311068	68	225	358	3.22	4.3	22	22.69	217.480
11168	65	224	368	3.21	4.3	21	22.67	222.570
21168	64	221	371	3.20	4.3	21	22.48	221.380
31168	64	215	37					

**MISSISSIPPI RIVER AT TARBERT LANDING**

DATE	TM	DIS CFS	SED PPH	VEL F/S	SLP 10-7	SVEL 10-3	DEP FT	TSED T/D	
		1000			10-7	10-3			
									1000
110169	39	546	541	4.44	43	14	35.58	797.54C	
120169	39	535	529	4.40	43	14	35.40	764.14D	
130169	39	517	506	4.35	43	14	34.74	706.33D	
140169	39	495	479	4.28	43	14	34.09	640.18C	
150169	39	472	440	4.21	43	14	33.26	56C.74D	
160169	39	447	407	4.13	43	14	32.37	491.21D	
170169	39	423	378	4.05	43	14	31.20	431.71D	
180169	39	389	350	3.94	43	14	30.04	367.C0D	
190169	41	361	320	3.83	43	15	29.11	311.70D	
200169	39	337	308	3.74	43	14	28.09	280.25D	
210169	39	324	288	3.69	43	14	27.21	251.54C	
220169	41	318	260	3.67	43	15	27.17	223.24C	
230169	43	319	254	3.67	43	15	27.30	212.77C	
240169	43	333	250	3.73	43	15	27.80	224.77D	
250169	43	361	256	3.83	43	15	29.11	245.52C	
260169	43	399	263	3.97	43	15	30.34	281.23D	
270169	43	439	279	4.11	43	15	31.94	320.70C	
280169	43	480	293	4.24	43	15	33.43	379.73D	
290169	43	521	316	4.36	43	15	34.92	444.52C	
300169	43	551	339	4.45	43	15	35.84	504.33C	
310169	43	580	358	4.53	43	15	36.79	560.61C	
10269	43	613	380	4.62	43	15	37.80	628.94D	
20269	43	662	396	4.75	43	15	39.21	707.81C	
30269	43	713	412	4.87	43	15	40.82	793.14D	
40269	43	748	428	4.96	43	15	41.64	844.35C	
50269	43	789	445	5.05	43	15	42.86	947.98D	
60269	43	821	462	5.12	43	15	43.75	24.12C	
70269	43	852	474	5.19	43	15	44.50	90.39D	
80269	43	877	482	5.24	43	15	45.23	141.33C	
90269	43	904	493	5.30	43	15	45.82	203.31D	
100269	43	923	499	5.34	43	15	46.28	243.56C	
110269	44	950	507	5.39	43	16	47.06	300.45D	
120269	44	956	544	5.40	43	16	47.25	404.17D	
130269	44	975	548	5.44	43	16	47.66	442.61D	
140269	44	996	542	5.46	43	16	48.19	457.55D	
150269	44	18	515	5.43	43	16	48.55	415.53D	
160269	44	42	404	5.40	43	16	48.88	436.61D	
170269	44	64	329	5.38	43	16	48.32	445.15C	
180269	44	46	315	5.36	43	16	48.31	445.15C	
190269	43	16	308	5.34	43	16	48.31	445.15C	
200269	43	997	304	5.46	43	15	48.27	818.34D	
210269	43	18	305	5.43	43	15	48.25	818.34D	
220269	43	37	311	5.40	43	15	48.25	818.34D	
230269	43	36	317	5.40	43	15	48.25	818.34D	
240269	43	30	323	5.40	43	15	48.25	818.34D	
250269	43	984	323	5.46	43	15	47.82	658.15C	
260269	43	942	320	5.37	43	15	46.96	812.89D	
270269	43	894	315	5.28	43	15	45.85	740.35C	
280269	44	846	309	5.17	43	16	44.52	705.82D	
10369	44	816	297	5.11	43	16	43.59	654.35C	
20369	44	783	286	5.04	43	16	42.62	604.43C	
30369	44	742	277	4.94	43	16	41.62	554.94C	
40369	44	700	266	4.84	43	16	40.42	502.74C	
50369	46	665	262	4.75	43	16	39.47	470.42D	
60369	46	639	261	4.69	43	16	38.46	449.60D	
70369	46	600	264	4.58	43	16	37.52	427.68D	
80369	46	581	271	4.53	43	16	36.89	425.12D	
90369	46	564	286	4.49	43	16	36.18	435.52D	
100369	46	552	307	4.45	43	16	35.93	457.55D	
110369	46	535	321	4.40	43	16	35.40	463.68D	
120369	44	516	334	4.35	43	16	34.64	465.33D	
130369	44	504	345	4.31	43	16	34.23	469.48D	
140369	46	493	362	4.28	43	16	33.88	481.86D	
150369	44	485	385	4.25	43	16	33.73	504.16D	
160369	44	481	404	4.24	43	16	33.53	524.67D	
170369	44	481	415	4.24	43	16	33.53	538.96C	
180369	44	490	426	4.27	43	16	33.80	563.60D	
190369	43	478	430	4.23	43	15	33.44	554.96D	
200369	43	471	431	4.21	43	15	33.16	548.10D	
210369	43	461	426	4.18	43	15	32.76	530.24D	
220369	43	453	412	4.15	43	15	32.57	503.92D	
230369	43	445	395	4.13	43	15	32.16	474.59D	
240369	43	449	375	4.14	43	15	32.37	454.61D	
250369	43	428	357	4.07	43	15	31.62	412.55C	
260369	43	419	337	4.04	43	15	31.28	381.25D	
270369	43	420	326	4.04	43	15	31.39	369.68D	
280369	44	429	317	4.07	43	16	31.73	367.18D	
290369	44	451	314	4.15	43	16	32.36	389.36C	
300369	44	480	316	4.24	43	16	33.43	409.54D	
310369	44	505	331	4.31	43	16	34.43	451.32D	
10469	56	534	376	4.40	43	19	35.31	542.12D	
20469	56	561	393	4.48	43	19	36.12	595.28D	
30469	54	589	400	4.56	43	18	36.95	743.34D	
40469	54	613	509	4.62	43	18	37.80	842.45D	
50469	54	631	537	4.67	43	18	38.25	914.89D	
60469	54	640	556	4.69	43	18	38.64	960.77C	
70469	56	645	579	4.70	43	19	38.86	4.33D	
80469	56	631	588	4.67	43	19	38.29	1.78D	
90469	56	611	598	4.61	43	19	37.65	986.52D	
100469	56	597	608	4.58	43	19	37.24	920.C4D	
110469	56	603	611	4.59	43	19	37.57	994.77D	
120469	56	605	615	4.60	43	19	37.52	4.60D	
130469	57	630	610	4.66	43	19	38.43	37.61D	
140469	57	644	606	4.70	43	19	38.77	53.71D	
150469	56	657	590	4.73	43	19	39.23	46.60C	
160469	56	669	582	4.76	43	19	39.59	52.07D	
170469	57	681	564	4.79	43	19	39.94	37.03D	
180469	57	699	528	4.84	43	19	40.33	596.49D	
190469	59	728	471	4.91	43	19	41.15	525.80D	
200469	59	752	428	4.96	43	19	41.97	869.01D	
210469	61	778	398	5.02	43	20	42.69	836.04D	
220469	61	785	377	5.04	43	20	42.78	799.05D	
230469	63	789	372	5.05	43	20	42.86	792.47D	
240469	63	791	366	5.05	43	20	43.03	781.67D	

**MISSISSIPPI RIVER AT TARBERT LANDING**

DATE	TM	DIS CFS	SED PPH	VEL F/S	SLP 10-7	SVEL 10-3	DEP FT	TSED T/D	
		1000			10-7	10-3			
									1000
250469	63	795	368	5.00	43	20	43.11	789.91D	
260469	63	810	373	5.10	43	20	43.36	815.75C	
270469	64	826	387	5.12	43	21	43.91	863.09D	
280469	64	845	402	5.17	43	21	44.44	917.16D	
290469	64	855	404	5.19	43	21	44.74	932.63D	
300469	64	868	401	5.22	43	21	45.02	939.78C	
10569	64	848	377	5.18	43	21	44.43	863.18D	
20569	64	832	350	5.14	43	21	44.14	786.24D	
30569	64	831	330	5.14	43	21	44.06	740.42D	
40569	64	829	305	5.14	43	21	43.90	682.68D	
50569	64	824	279	5.13	43	21	43.75	620.72D	
60569	64	813	271	5.10	43	21	43.60	594.87D	
70569	64	804	268	5.08	43	21	43.36	581.77D	
80569	64	789	271	5.05	43	21	42.86	577.31C	
90569	66	777	277	5.02	43	21	42.60	581.12D	
100569	66	771	284	5.01	43	21	42.35	591.20D	
110569	66	766	297	5.00	43	21	42.18	614.26D	
120569	68	741	314	4.96	43	21	41.89	628.59C	
130569	68	721	324	4.94	43	22	41.53	628.22D	
140569	68	701	327	4.89	43	22	41.03	628.78D	
150569	68	679	331	4.84	43	22	40.50	618.91D	
160569	70	663	335	4.79	43	22	39.77	606.82D	
170569	70	646	336	4.75	43	22	39.30	599.68D	
180569	70	636	338	4.71	43	22	38.71	586.05D	
190569	70	623	334	4.68	43	22	38.51	580.41D	
200569	70	613	330	4.65	43	22	38.02	561.82C	
210569	72	610	328	4.62	43	22	37.80	547.96D	
220569	72	606	317	4.61	43	23	37.76	540.22D	
230569	72	602	304	4.60	43	23	37.62	518.68D	
240569	72	603	292	4.59	43	23	37.48	494.12D	
250569	72	604	285	4.59	43	23	37.57	475.41D	
260569	73	590	282	4.50	43	23	37.43	464.78D	
270569	73	578	281	4.56	43	23	37.05	449.23D	
280569	75	577	281	4.53	43	23	36.60	438.53D	
290569	75	577	281	4.52	43	24	36.74	437.77C	
300569	75	576	283	4.52	43	24	36.64	440.12D	
310569	75	571	295	4.51	43	24	36.39	454.80C	
10669	64	566	308	4.46	43				

MISSISSIPPI RIVER AT TARBERT LANDING							
DATE	TM	CIS	SED	VEL	SLP	SVEL	DEP
	F	CFS	PPM	F/S	F/S	FT	T/SD
		1000		10-7	10-3		1000
73869	82	371	298	3.87	43	25	29.45
80469	82	356	298	3.82	43	25	28.72
90869	82	337	298	3.74	43	25	28.09
103869	84	321	297	3.68	43	26	27.34
113869	84	306	297	3.62	43	26	26.67
120869	84	290	296	3.55	43	26	26.01
130869	84	276	296	3.49	43	26	25.35
140869	82	265	295	3.44	43	25	24.84
150869	82	257	281	3.40	43	25	24.53
160869	82	253	269	3.38	43	25	24.26
170869	84	252	263	3.38	43	25	24.22
180869	84	259	262	3.41	43	26	24.61
190869	82	262	259	3.42	43	26	24.83
200869	82	267	258	3.45	43	25	24.92
210869	82	272	255	3.47	43	25	25.20
220869	82	273	253	3.47	43	25	25.34
230869	84	266	249	3.44	43	26	24.98
240869	84	258	242	3.41	43	26	24.47
250869	84	253	239	3.38	43	26	24.36
260869	82	254	238	3.39	43	25	24.30
270869	82	257	237	3.40	43	25	24.53
280869	82	259	236	3.41	43	25	24.61
290869	82	260	236	3.42	43	25	24.55
300869	82	263	231	3.43	43	25	24.77
310869	82	266	228	3.44	43	25	24.98
10369	81	268	218	3.45	43	25	25.06
20369	81	268	207	3.45	43	25	25.06
30369	81	265	195	3.44	43	25	24.84
40369	81	260	188	3.42	43	25	24.55
50369	81	251	181	3.37	43	25	24.28
60369	81	236	173	3.30	43	25	23.50
70369	81	220	167	3.22	43	25	22.68
80369	81	209	161	3.16	43	25	22.15
90369	81	200	155	3.11	43	25	21.69
100369	82	195	150	3.09	43	25	21.44
110369	82	194	152	3.06	43	25	21.31
120369	82	197	152	3.10	43	25	21.40
130369	84	203	151	3.13	43	26	21.78
140369	84	209	153	3.16	43	26	22.15
150369	82	214	156	3.19	43	25	22.34
160369	81	214	158	3.19	43	25	22.34
170369	79	211	161	3.17	43	25	22.27
180369	79	208	163	3.16	43	25	22.19
190369	79	207	167	3.15	43	25	22.03
200369	79	207	170	3.15	43	25	22.03
210369	81	205	174	3.14	43	25	21.91
220369	81	201	178	3.12	42	25	21.66
230369	79	196	182	3.09	43	25	21.44
240369	79	195	185	3.09	43	25	21.27
250369	77	198	189	3.10	43	24	21.57
260369	75	205	194	3.14	42	24	21.91
270369	75	212	199	3.18	43	24	22.23
280969	75	219	203	3.22	43	24	22.52
290969	73	224	208	3.24	43	23	22.89
300969	73	229	213	3.27	43	23	23.05
11069	73	228	230	3.26	43	23	23.10
21069	75	221	243	3.23	43	24	22.63
31069	75	212	251	3.18	43	24	22.23
41069	75	208	255	3.16	43	24	21.99
51069	73	206	256	3.15	43	23	21.87
61069	73	211	255	3.17	43	23	22.27
71069	73	221	250	3.23	43	23	22.63
81069	73	208	244	3.16	43	23	21.99
91069	75	203	234	3.13	43	24	21.78
101069	75	197	228	3.10	43	24	21.40
111069	75	195	224	3.09	43	24	21.27
121069	75	192	221	3.07	43	24	21.17
131069	75	189	224	3.05	43	24	21.06
141069	70	186	225	3.04	43	22	20.76
151069	70	186	228	3.04	43	22	20.76
161069	75	190	234	3.06	43	24	21.04
171069	70	194	241	3.06	43	22	21.31
181069	70	199	254	3.11	43	22	21.53
191069	70	212	265	3.18	43	22	22.23
201069	70	242	281	3.33	43	22	23.78
211069	70	284	301	3.52	43	22	25.82
221069	66	323	328	3.69	43	21	27.39
231069	66	361	367	3.83	43	21	29.11
241069	66	394	423	3.95	43	21	30.40
251069	64	417	469	4.03	43	21	31.27
261069	63	423	491	4.05	43	20	31.50
271069	63	418	481	4.04	43	20	31.17
281069	61	393	457	3.95	43	20	30.29
291069	61	368	429	3.86	43	20	29.30
301069	61	350	399	3.79	43	20	28.43
311069	61	334	371	3.73	43	20	27.93
11169	59	150	267	2.81	43	19	18.80
21169	59	144	262	2.77	43	19	18.42
31169	59	138	259	2.73	43	19	18.01
41169	57	132	252	2.69	43	19	17.57
51169	57	127	246	2.65	43	19	17.30
61169	57	121	234	2.61	43	19	16.80
71169	59	117	222	2.58	43	19	16.51
81169	59	113	207	2.55	43	19	16.20
91169	57	109	191	2.51	43	19	16.05
101169	57	107	175	2.50	43	19	15.79
111169	57	107	164	2.50	43	19	15.79
121169	59	108	153	2.51	43	19	15.83
131169	59	113	142	2.55	43	19	16.20
141169	58	115	136	2.56	43	19	16.45
151169	55	111	128	2.57	43	18	16.13
161169	57	108	126	2.51	43	19	15.83
171169	57	104	122	2.47	43	19	15.66
181169	55	99	120	2.43	43	18	15.23

MISSISSIPPI RIVER AT TARBERT LANDING							
DATE	TM	DIS	SEC	VEL	SLP	SVEL	DEP
	F	CFS	FFM	F/S	F/S	FT	T/SD
		1000		10-7	10-3		1000
191169	55	97	115	2.41	43	18	15.13
201169	54	96	113	2.42	43	18	15.07
211169	54	99	111	2.42	43	18	15.23
221169	54	107	112	2.50	43	18	15.79
231169	54	116	114	2.57	43	18	16.48
241169	54	123	116	2.62	43	18	17.03
251169	54	127	126	2.65	43	18	17.30
261169	54	131	152	2.68	43	18	17.55
271169	52	134	166	2.70	43	18	17.78
281169	50	137	175	2.73	43	17	17.81
291169	48	139	182	2.74	43	17	18.02
301169	52	139	186	2.74	43	18	18.02
11269	55	313	303	3.65	43	18	26.55
21269	54	305	300	3.61	43	18	26.75
31269	54	293	295	3.56	43	18	26.20
41269	54	280	288	3.51	43	18	25.48
51269	50	275	279	3.48	43	17	25.41
61269	48	281	272	3.51	43	17	25.62
71269	50	277	263	3.49	43	17	25.48
81269	48	269	257	3.46	43	17	24.99
91269	46	267	251	3.45	43	16	24.92
101269	46	268	248	3.45	43	16	25.06
111269	46	263	244	3.43	43	16	24.77
121269	46	262	242	3.42	43	16	24.73
131269	46	260	240	3.42	43	16	24.55
141269	45	260	239	3.42	43	16	24.55
151269	45	262	239	3.42	43	16	24.83
161269	46	262	241	3.42	43	16	24.83
171269	46	260	245	3.42	43	16	24.55
181269	46	255	253	3.39	43	16	24.45
191269	46	255	258	3.39	43	16	24.45
201269	46	255	266	3.39	43	16	24.45
211269	48	257	275	3.40	43	17	24.53
221269	46	251	285	3.37	43	16	24.28
231269	46	265	296	3.44	43	16	24.84
241269	46	273	306	3.47	43	16	25.34
251269	46	280	319	3.51	43	16	25.48
261269	46	287	331	3.54	43	16	25.81
271269	48	289	346	3.55	43	17	25.87
281269	48	285	357	3.53	43	17	25.75
291269	48	284	369	3.52	43	17	25.82
301269	43	288	385	3.54	43	15	25.95
311269	43	273	383	3.47	43	15	25.34
10170	43	276	393	3.37	43	15	25.98
20170	43	292	401	3.44	43	15	26.72
30170	43	318	419	3.55	43	15	27.88
40170	43	348	438	3.68	43	15	29.06
50170	43	394	466	3.86	43	15	30.84
60170	43	464	500	4.11	43	15	33.55
70170	43	509	537	4.26	43	15	34.85
80170	39	554	581	4.40	43	14	36.30
90170	41	596	630	4.52	43	15	37.65
100170	43	635	666	4.63	43	15	38.82
110170	43	671	684	4.72	43	15	39.85
120170	37	657	693	4.80	42	13	40.58
130170	39	699	684	4.81	43	14	40.58
140170	41	694	664	4.79	43	15	40.51
150170	43	665	625	4.72	43	15	39.61
160170	41	625	584	4.60	43	15	36.54
170170	39	581	541	4.48	43	14	37.15
180170	37	533	505	4.33	43	13	35.69
190170							

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	CIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	F/S	FT	T/D	1000	
		10-7 10-3						
30370	45	512	362	4.27	43	16	34.94	500.430
40370	46	528	358	4.32	43	16	35.47	510.366
50370	47	518	354	4.28	43	16	35.23	495.100
60370	46	511	346	4.26	43	16	34.98	477.380
70370	46	501	342	4.23	43	16	34.63	462.620
80370	46	493	340	4.20	43	16	34.40	452.570
90370	46	487	339	4.18	43	16	34.20	445.750
100370	46	481	341	4.16	43	16	34.00	442.860
110370	46	481	343	4.16	43	16	34.00	445.450
120370	50	482	345	4.17	43	17	33.97	448.980
130370	50	492	348	4.20	43	17	34.33	462.280
140370	46	509	350	4.26	43	16	34.85	481.000
150170	46	526	351	4.31	43	16	35.44	498.490
160370	46	542	351	4.36	43	16	35.95	513.650
170370	48	555	348	4.40	43	17	36.36	521.480
180370	48	564	344	4.43	43	17	36.62	523.840
190370	50	569	338	4.44	43	17	36.76	518.360
200370	48	570	332	4.44	43	17	36.88	510.950
210370	50	567	321	4.44	43	17	36.70	491.420
220370	46	568	309	4.44	43	16	36.76	473.680
230370	46	562	297	4.42	43	16	36.59	450.670
240370	46	555	288	4.40	43	16	36.36	431.570
250370	46	548	281	4.38	43	16	36.13	415.770
260370	48	542	275	4.36	43	17	35.95	402.430
270370	48	542	268	4.36	43	17	35.55	392.190
280370	48	543	262	4.36	43	17	36.02	384.120
290370	48	546	258	4.37	43	17	36.10	380.340
300370	48	548	254	4.38	43	17	36.13	375.820
310370	50	548	249	4.38	43	17	36.13	368.420
10470	59	542	247	4.36	43	18	35.95	361.460
20470	50	537	249	4.34	43	17	35.84	361.030
30470	52	541	259	4.36	43	18	35.89	378.320
40470	52	548	281	4.38	43	18	36.13	415.770
50470	52	553	304	4.39	43	18	36.34	453.900
60470	52	558	324	4.41	43	18	36.45	468.140
70470	52	564	374	4.43	43	18	36.62	428.410
80470	54	573	400	4.45	43	18	36.96	578.620
90470	55	590	400	4.50	43	18	37.49	637.200
100470	54	619	432	4.59	43	18	38.30	722.000
110470	54	649	455	4.67	43	18	39.22	797.300
120470	54	677	477	4.75	43	18	39.58	871.910
130470	54	698	494	4.80	43	18	40.63	930.590
140470	54	703	515	4.82	43	18	40.70	977.520
150470	54	706	532	4.82	43	18	40.86	14.100
160470	58	710	549	4.83	43	19	40.98	52.430
170470	54	712	556	4.84	43	18	40.99	68.650
180470	57	710	557	4.83	43	19	40.98	67.770
190470	57	715	556	4.85	43	19	41.05	73.360
200470	59	702	555	4.81	43	19	40.75	51.950
210470	63	694	349	4.79	43	20	40.51	28.720
220470	63	683	527	4.76	43	20	40.21	971.840
230470	64	684	507	4.77	43	21	40.17	936.330
240470	64	682	497	4.76	43	21	40.16	915.180
250470	63	677	491	4.75	43	20	40.09	900.150
260470	64	681	488	4.76	43	21	40.10	867.290
270470	64	688	488	4.78	43	21	40.29	906.510
280470	64	698	491	4.80	43	21	40.63	925.340
290470	66	723	495	4.87	43	21	41.27	966.290
300470	66	746	497	4.92	43	21	41.89	1.600
10570	64	766	505	4.96	43	21	42.42	44.440
20570	64	708	509	5.03	43	21	43.05	82.950
30570	63	790	513	5.06	43	20	43.25	105.310
40570	65	806	515	5.08	43	21	43.45	120.740
50570	64	824	528	5.12	43	21	43.95	174.690
60570	64	844	529	5.17	43	21	44.43	225.490
70570	66	867	519	5.22	43	21	45.04	214.930
80570	66	885	499	5.26	43	21	45.50	192.360
90570	66	880	476	5.25	43	21	45.36	130.490
100570	68	887	448	5.27	43	22	45.45	72.920
110570	69	895	420	5.28	43	22	45.77	14.630
120570	70	911	399	5.32	43	22	46.12	961.400
130570	70	928	375	5.36	43	22	46.51	939.600
140570	72	945	351	5.39	43	23	47.00	855.560
150570	72	957	315	5.42	43	23	47.24	813.530
160570	70	952	292	5.41	43	23	47.11	750.560
170570	68	948	277	5.40	43	22	47.03	709.010
180570	70	929	268	5.36	43	22	46.56	672.220
190570	70	913	264	5.32	43	22	46.22	650.790
200570	72	852	262	5.28	43	23	45.63	631.000
210570	72	870	260	5.23	43	23	45.08	610.740
220570	73	851	261	5.18	43	23	44.67	596.700
230570	73	833	262	5.14	43	23	44.19	589.260
240570	73	821	265	5.11	43	23	43.90	587.430
250570	74	808	208	5.08	43	23	43.55	584.670
260570	73	799	288	5.06	43	23	43.30	621.300
270570	73	790	300	5.04	43	23	43.05	629.900
280570	73	773	313	5.00	43	23	42.58	653.200
290570	75	759	320	4.97	43	24	42.26	655.780
300570	75	750	326	4.94	43	24	41.99	660.150
310570	72	736	327	4.90	43	23	41.66	649.810
10670	75	719	322	4.86	43	24	41.16	625.100
20670	73	692	317	4.79	43	21	40.40	592.290
30670	73	653	314	4.68	43	23	39.34	553.610
40670	73	611	312	4.56	43	23	38.13	514.710
50670	73	678	311	4.75	43	23	40.04	485.350
60670	73	547	311	4.38	43	23	36.07	459.370
70670	73	524	312	4.30	43	23	35.41	441.420
80670	74	508	312	4.25	43	23	34.88	427.640
90670	73	499	312	4.22	43	23	34.60	420.360
100670	76	498	314	4.22	43	24	34.51	422.200
110670	74	509	316	4.26	43	23	34.85	434.280
120670	77	521	323	4.30	43	24	35.15	457.110
130670	77	536	326	4.34	43	24	35.78	471.700
140670	77	544	330	4.37	43	24	35.98	484.700

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	CIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	F/S	FT	T/D	1000	
		10-7 10-3						
150670	77	552	335	4.30	43	24	36.28	499.280
160670	79	552	344	4.39	43	24	36.28	512.700
170670	79	550	352	4.38	43	25	36.25	522.720
180670	79	542	355	4.36	43	25	35.95	534.140
190670	79	526	373	4.31	43	25	35.44	529.730
200670	79	509	380	4.26	43	25	34.85	522.230
210670	79	493	389	4.20	43	25	34.40	517.800
220670	79	489	397	4.19	43	25	34.24	524.160
230670	79	484	406	4.17	43	25	34.10	530.560
240670	79	489	420	4.19	43	25	34.24	554.530
250670	81	497	424	4.22	43	25	34.47	568.970
260670	81	502	436	4.23	43	25	34.69	590.950
270670	81	498	443	4.22	43	25	34.53	595.660
280670	81	490	450	4.19	43	25	34.30	555.350
290670	81	484	458	4.17	43	25	34.10	598.510
300670	81	477	466	4.15	43	25	33.83	600.160
10770	81	472	463	4.12	43	25	33.69	590.050
20770	81	463	461	4.10	43	25	33.36	576.300
30770	81	450	460	4.06	43	25	32.88	558.900
40770	82	429	460	3.95	43	25	32.10	532.820
50770	81	406	458	3.90	43	25	31.33	502.060
60770	82	382	456	3.81	43	25	30.43	470.320
70770	82	355	455	3.71	43	25	29.32	436.120
80770	82	330	454	3.66	43	25	28.38	404.510
90770	83	312	454	3.63	43	25	27.57	382.450
100770	82	301	447	3.48	43	25	27.12	363.280
110770	82	291	437	3.44	43	25	26.64	343.350
120770	82	285	421	3.41	43	25	26.40	323.560
130770	82	274	405	3.36	43	25	25.89	299.620
140770	82	268	399	3.33	43	25	25.63	286.720
150770	82	259	382	3.29	43	25	25.19	267.130
160770	82	254	365	3.26	43	25	25.00	250.320
170770	82	244	359	3.21	42	25	24.53	236.510
180770	82	235	352	3.17	43	25	24.04	223.340
190770	84	229	350	3.13	43	26	23.82	216.400
200770	84	226	348	3.12	43	26	23.62	212.350
210770	82	222	352	3.10	43	25	23.40	210.990
220770	82	215						

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D
		1000		10-7 10-3			1000	
270970	79	265	321	3.31	43	25	25.55	229.680
280970	79	286	340	3.41	43	25	26.42	262.550
290970	79	291	358	3.44	43	25	26.64	281.260
300970	75	293	379	3.44	43	24	26.81	299.830
11070	75	303	348	3.49	43	24	27.19	284.700
21070	75	330	370	3.60	43	24	28.36	325.670
31070	75	360	386	3.73	43	24	29.52	375.190
41070	75	388	399	3.84	43	24	30.59	417.990
51070	74	405	412	3.90	43	23	31.26	450.520
61070	73	421	423	3.96	43	23	31.83	480.820
71070	73	422	412	3.96	43	23	31.90	469.430
81070	72	408	392	3.91	43	23	31.38	431.830
91070	70	389	365	3.84	43	22	30.66	383.360
101070	70	370	342	3.77	43	22	29.90	341.660
111070	70	352	336	3.70	43	22	29.18	319.310
121070	69	365	346	3.75	43	22	29.71	340.980
131070	69	361	332	3.73	43	22	29.60	323.600
141070	68	331	316	3.61	43	22	28.37	262.410
151070	68	313	299	3.53	43	22	27.65	252.680
161070	67	305	285	3.50	43	21	27.27	234.700
171070	66	296	283	3.46	43	21	26.88	226.170
181070	65	294	282	3.45	43	21	26.60	223.950
191070	65	305	293	3.50	43	21	27.27	241.250
201070	64	328	331	3.60	43	21	28.22	293.130
211070	64	352	361	3.70	43	21	29.18	342.090
221070	64	373	395	3.78	43	21	30.41	357.600
231070	64	383	326	3.82	43	21	30.41	440.230
241070	64	386	335	3.83	43	21	30.53	453.360
251070	63	379	424	3.80	43	20	30.30	433.880
261070	63	369	404	3.76	43	20	29.92	420.510
271070	64	358	386	3.72	43	21	29.46	373.210
281070	63	351	386	3.69	43	20	29.20	365.810
291070	63	348	388	3.68	43	20	29.06	364.560
301070	62	354	403	3.70	43	20	29.34	385.190
311070	62	364	424	3.74	43	20	29.73	416.710
11170	62	371	436	3.77	43	20	29.98	436.740
21170	61	368	437	3.76	43	20	29.85	434.290
31170	60	359	422	3.72	43	20	29.54	405.040
41170	59	356	431	3.71	43	19	29.40	414.280
51170	58	342	411	3.65	43	19	28.87	375.520
61170	59	334	391	3.62	43	19	28.52	352.600
71170	58	347	407	3.66	43	19	28.98	381.320
81170	59	362	418	3.74	43	19	29.58	408.550
91170	59	374	420	3.78	43	19	30.11	424.120
101170	59	380	412	3.81	43	19	30.28	422.710
111170	59	381	418	3.81	43	19	30.35	420.000
121170	58	386	434	3.82	43	19	30.53	452.310
131170	58	400	449	3.88	43	19	31.09	484.920
141170	58	414	441	3.93	43	19	31.62	492.950
151170	57	412	424	3.92	43	19	31.57	471.660
161170	57	409	357	3.91	43	19	31.45	394.240
171170	56	400	334	3.88	43	19	31.09	360.720
181170	56	354	320	3.86	43	19	30.84	340.420
191170	55	390	314	3.84	43	18	30.73	330.640
201170	55	396	306	3.87	43	18	30.89	327.180
211170	54	394	304	3.86	43	18	30.84	323.400
221170	55	389	301	3.84	43	18	30.66	316.140
231170	53	385	298	3.82	43	18	30.55	309.770
241170	51	382	290	3.81	43	18	30.43	299.110
251170	50	380	287	3.81	43	17	30.28	294.460
261170	51	378	285	3.80	43	18	30.22	290.670
271170	51	377	285	3.79	43	18	30.24	290.100
281170	50	375	283	3.79	43	17	30.09	286.540
291170	49	375	280	3.79	43	17	30.09	291.400
301170	49	381	298	3.81	43	17	30.35	306.850
11270	50	385	302	3.82	43	17	30.55	313.930
21270	50	385	303	3.82	43	17	30.55	314.970
31270	51	380	296	3.81	43	18	30.28	303.700
41270	51	369	270	3.76	43	18	29.92	265.000
51270	51	354	261	3.70	43	18	29.34	249.480
61270	51	338	253	3.64	43	18	28.65	230.890
71270	50	319	241	3.55	43	17	27.88	204.920
81270	50	298	235	3.47	43	17	26.96	185.080
91270	50	809	222	5.08	43	17	43.60	167.830
101270	51	270	218	3.34	43	18	25.72	158.920
111270	52	266	213	3.32	43	18	25.55	152.980
121270	50	263	212	3.30	43	17	25.46	150.540
131270	50	264	220	3.31	43	17	25.46	156.820
141270	50	268	226	3.33	43	17	25.63	163.530
151270	49	272	232	3.35	43	17	25.81	171.120
161270	49	274	239	3.36	43	17	25.89	176.810
171270	48	275	240	3.36	43	17	25.98	178.200
181270	48	275	230	3.36	43	17	25.98	176.710
191270	48	276	236	3.37	43	17	25.98	175.870
201270	48	280	242	3.39	43	17	26.14	182.950
211270	48	290	252	3.43	43	17	26.64	197.320
221270	49	298	266	3.47	43	17	26.96	214.020
231270	51	312	284	3.53	43	18	27.57	239.240
241270	49	326	304	3.59	43	17	28.16	267.580
251270	48	340	331	3.65	43	17	28.71	303.860
261270	47	355	352	3.71	43	16	29.32	337.390
271270	47	371	380	3.77	43	16	29.98	380.450
281270	46	393	406	3.85	43	16	30.86	430.910
291270	46	426	432	3.98	43	16	31.99	496.890
301270	46	454	451	4.07	43	16	33.00	552.840
311270	45	475	488	4.14	43	16	33.85	625.860
10171	45	493	500	4.11	43	16	34.15	665.550
20171	44	503	513	4.14	43	16	34.15	696.710
30171	44	510	526	4.17	43	16	34.48	724.300
40171	43	513	541	4.12	43	16	34.66	749.340
50171	43	511	557	4.17	43	15	34.60	766.490
60171	43	510	569	4.17	43	15	34.48	783.510
70171	42	508	565	4.16	43	15	34.41	774.950
80171	41	517	559	4.19	43	15	34.97	780.310

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D
		1000		10-7 10-3			1000	
90171	40	515	550	4.18	43	14	64.91	764.770
100171	40	509	532	4.16	43	14	64.53	731.130
110171	41	505	510	4.15	43	15	64.22	695.380
120171	41	491	489	4.10	43	15	63.38	648.270
130171	41	483	480	4.07	43	15	62.91	625.970
140171	41	481	470	4.06	43	15	62.84	610.390
150171	42	483	466	4.07	43	15	62.91	607.710
160171	41	485	467	4.08	43	15	62.99	610.539
170171	42	488	474	4.09	43	15	63.18	624.540
180171	42	493	481	4.11	43	15	63.45	640.260
190171	41	496	480	4.12	43	15	63.65	642.820
200171	41	495	478	4.11	43	15	63.70	638.850
210171	41	486	474	4.08	43	15	63.11	621.980
220171	41	476	460	4.04	43	15	62.56	591.190
230171	41	467	452	4.01	43	15	61.95	569.930
240171	42	460	448	3.98	43	15	61.59	556.420
250171	42	457	439	3.97	43	15	61.38	541.680
260171	42	456	434	3.97	43	15	61.25	534.340
270171	41	449	423	3.94	43	15	60.87	512.800
280171	41	438	414	3.90	43	15	60.13	489.600
290171	42	430	407	3.87	43	15	59.60	472.530
300171	43	418	399	3.82	43	15	58.87	450.310
310171	43	408	390	3.78	43	15	58.21	429.620
10271	43	398	390	3.74	43	15	57.54	415.090
20271	42	394	392	3.72	43	15	57.33	417.010
30271	42	390	393	3.71	43	15	56.95	413.830
40271	45	389	395	3.70	43	16	56.98	414.870
50271	43	393	397	3.72	43	15	57.19	421.260
60271	44	391	399	3.71	43	16	57.05	421.220
70271	44	390	399	3.71	43	16	56.95	420.150
80271	42	383	386	3.68	43	15	56.48	399.160
90271	41	375	355	3.64	43	15	56.05	359.440
100271	41	364	329	3.60	43	15	55.16	323.340
110271	42	353	326	3.55	43	15	54.42	310.710
120271	43	357	318	3.57	43	15	54.66	306.520
130271	40	375	331	3.64	43	14	56.05	335.140
140271	40	401	353	3.75	43	14	57.78	



MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	CIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	F/S	F/S	FT	T/D	1000
				10-7 10-3				1000
230471	63	360	290	3.67	43	20	56.23	297.540
240471	64	372	287	3.63	43	21	55.79	288.260
250471	64	363	277	3.59	43	21	55.19	271.490
260471	65	356	268	3.56	43	21	54.69	257.600
270471	66	348	260	3.53	43	21	54.02	244.300
280471	66	338	255	3.48	43	21	53.40	232.710
290471	68	333	256	3.46	43	22	52.98	230.170
300471	68	331	255	3.45	43	22	52.85	227.890
10571	67	333	254	3.46	43	21	52.98	228.370
20571	67	337	262	3.48	43	21	53.24	238.390
30571	68	345	274	3.52	43	22	53.75	255.230
40571	68	354	295	3.55	43	22	54.57	280.960
50571	68	345	301	3.52	43	22	53.75	280.380
60571	68	336	296	3.47	43	22	53.27	266.510
70571	68	347	305	3.52	43	22	54.05	285.750
80571	68	352	324	3.55	43	22	54.27	307.930
90571	69	353	328	3.55	43	22	54.42	312.620
100571	69	355	332	3.56	43	22	54.54	318.220
110571	70	355	410	3.56	43	22	54.69	394.090
120571	70	377	376	3.65	43	22	56.16	382.730
130571	69	384	378	3.68	43	22	56.63	391.910
140571	69	379	378	3.66	43	22	56.27	386.610
150571	68	387	420	3.70	43	22	56.70	438.860
160571	68	400	480	3.75	43	22	57.64	518.400
170571	68	419	555	3.83	43	22	58.63	627.870
180571	69	434	596	3.88	43	22	59.96	698.390
190571	70	445	635	3.93	43	22	60.52	762.950
200571	70	475	656	4.04	43	22	62.44	841.320
210571	70	501	680	4.13	43	22	64.08	919.840
220571	70	520	702	4.20	43	22	65.15	985.410
230571	71	537	725	4.26	43	22	66.12	112.300
240571	71	553	745	4.32	43	22	66.93	112.300
250571	71	565	754	4.36	43	22	67.61	150.230
260571	72	570	751	4.37	43	23	68.01	155.790
270571	72	558	735	4.33	43	23	67.34	107.350
280571	73	543	670	4.28	43	23	66.47	982.290
290571	73	521	585	4.21	43	23	65.10	822.920
300571	72	496	508	4.12	43	23	63.65	680.310
310571	73	471	447	4.02	43	23	62.28	568.450
10671	73	442	400	3.91	43	23	60.48	477.360
20671	73	430	360	3.87	43	23	59.60	417.960
30671	72	418	329	3.82	43	23	58.87	371.310
40671	73	392	310	3.72	43	23	57.05	328.100
50671	73	370	293	3.62	43	23	55.68	292.710
60671	73	351	284	3.54	43	23	54.30	269.150
70671	74	328	274	3.48	43	23	53.40	250.050
80671	74	330	268	3.45	43	23	52.70	238.790
90671	75	327	267	3.43	43	24	52.59	235.730
100671	76	324	266	3.42	43	24	52.30	232.700
110671	76	321	264	3.41	43	24	52.01	228.810
120671	77	318	261	3.39	43	24	51.89	224.090
130671	77	315	257	3.38	43	24	51.59	218.580
140671	79	312	257	3.36	43	25	51.47	216.500
150671	80	312	257	3.36	43	25	51.47	216.500
160671	80	316	263	3.38	43	25	51.75	224.390
170671	80	319	268	3.40	43	25	51.87	230.830
180671	81	316	268	3.38	43	25	51.75	228.660
190671	81	313	265	3.37	43	25	51.45	223.950
200671	81	312	264	3.36	43	25	51.47	222.390
210671	82	318	272	3.39	43	25	51.89	233.540
220671	82	321	283	3.41	43	25	52.01	245.280
230671	82	327	295	3.43	43	25	52.59	260.460
240671	82	333	311	3.46	43	25	52.98	279.620
250671	82	337	333	3.48	43	25	53.24	303.000
260671	83	344	348	3.51	43	25	53.78	322.220
270671	83	346	358	3.52	43	25	53.90	334.440
280671	83	343	358	3.51	43	25	53.63	331.540
290671	84	333	355	3.46	43	26	52.98	319.180
300671	84	319	350	3.40	43	26	51.87	301.450
10771	84	308	335	3.35	43	26	51.00	278.590
20771	84	303	322	3.32	43	26	50.73	263.430
30771	84	292	314	3.27	43	26	49.81	247.560
40771	84	286	294	3.24	43	26	49.35	227.030
50771	84	279	293	3.21	43	26	48.70	220.720
60771	84	273	286	3.18	43	26	48.21	210.610
70771	85	266	282	3.14	43	26	47.70	202.530
80771	85	255	278	3.08	43	26	46.83	191.400
90771	86	249	268	3.05	43	26	46.28	180.180
100771	86	246	259	3.03	43	26	46.09	172.030
110771	87	240	254	3.00	43	26	45.53	164.590
120771	87	234	245	2.97	43	26	44.95	154.790
130771	87	228	239	2.94	43	26	44.35	147.130
140771	88	221	232	2.90	43	27	43.72	136.430
150771	88	217	228	2.87	43	27	43.47	133.590
160771	88	215	229	2.86	43	27	43.26	132.930
170771	88	217	231	2.87	43	27	43.47	135.340
180771	88	223	240	2.91	43	27	43.93	144.500
190771	88	231	253	2.95	43	27	44.74	157.800
200771	87	242	269	3.01	43	26	45.72	175.760
210771	86	250	288	3.06	43	26	46.29	194.400
220771	86	260	306	3.11	43	26	47.18	214.810
230771	85	268	316	3.15	43	26	47.87	230.100
240771	84	273	323	3.18	43	26	48.21	238.080
250771	79	275	334	3.19	43	26	48.37	247.970
260771	79	278	351	3.20	43	25	48.71	263.460
270771	81	276	358	3.19	43	25	48.54	266.780
280771	81	279	378	3.21	43	25	48.70	284.750
290771	81	289	391	3.25	43	25	49.67	305.100
300771	81	296	397	3.29	43	25	50.12	317.280
310771	81	294	400	3.28	43	25	49.97	317.520
10871	84	294	399	3.28	43	26	49.97	316.710
20871	84	293	399	3.27	43	26	49.98	307.740
30871	84	294	382	3.22	43	26	49.19	292.520
40871	84	279	367	3.21	43	26	48.70	276.460

MISSISSIPPI RIVER AT TARBERT LANDING

DATE	TM	DIS	SEC	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	F/S	F/S	FT	T/D	1000
				10-7 10-3				1000
50871	84	273	356	3.18	43	26	46.21	262.410
60871	84	273	344	3.18	43	26	46.21	253.560
70871	84	275	323	3.19	43	26	46.37	254.660
80871	84	281	337	3.22	43	26	46.86	255.680
90871	84	288	342	3.25	43	26	47.50	265.640
100871	84	295	372	3.28	43	26	48.13	296.300
110871	84	299	374	3.30	43	26	48.43	301.630
120871	84	302	384	3.32	43	26	48.57	313.110
130871	86	304	394	3.33	43	26	48.71	323.400
140871	86	306	398	3.34	43	26	48.86	328.820
150871	84	311	403	3.36	43	26	49.31	338.400
160871	86	313	406	3.37	43	26	49.45	343.110
170871	82	310	394	3.36	43	25	49.15	325.760
180871	82	298	370	3.30	43	25	48.27	277.700
190871	82	282	349	3.22	43	25	47.03	265.730
200871	81	266	330	3.14	43	25	47.70	237.010
210871	81	249	310	3.05	43	25	46.26	208.410
220871	81	237	294	2.99	43	25	45.15	188.130
230871	81	228	289	2.94	43	25	44.35	177.910
240871	81	218	265	2.88	43	25	43.49	155.980
250871	81	210	241	2.83	43	25	42.81	136.650
260871	81	203	242	2.75	43	25	42.11	122.640
270871	81	202	241	2.79	43	25	41.91	124.440
280871	81	205	243	2.80	43	25	42.34	134.500
290871	81	212	255	2.84	43	25	43.02	145.960
300871	81	220	263	2.85	43	25	43.70	156.220
310871	81	224	272	2.91	43	25	44.12	164.510
10971	81	226	276	2.92	43	25	44.32	168.420
20971	81	226	279	2.92	43	25	44.32	170.250
30971	81	230	282	2.95	43	25	44.55	175.120
40971	81	232	281	2.96	43	25	44.75	176.620
50971	81	233	288	2.96	43	25	44.93	168.600
60971	81	228	262	2.94	43	25	44.35	161.290
70971	81	222	251	2.90	43	25	43.91	150.450
80971	81	211	241	2.84	43	25	42.83	137.300
90971	81	202	236	2.75	43	25	41.91	126.710
100971	81	200	224	2.77	43	25		

RED RIVER ABOVE OLD RIVER

DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	F	CFS	PPM	F/S	10-7	10-3	FT	T/D
		1000						1000
300365	54	76	168	2.37	77	18	34.80	34,718
300465	63	97	129	2.82	77	20	35.96	86,430
210465	72	53	145	1.82	77	23	33.32	20,607
505465	69	35	48	1.35	77	22	31.59	432,800
103565	63	29	190	1.15	77	22	30.68	343,710
263565	69	24	238	1.03	77	22	30.06	347,820
103665	25	18	378	0.83	77	8	29.14	363,330
240665	81	19	53	0.87	77	25	29.18	420,600
242665	87	21	48	0.93	77	26	29.67	2,719
737665	88	20	53	0.90	77	27	29.44	2,790
150765	97	14	46	0.69	77	29	28.28	1,798
223765	92	12	22	0.62	77	28	27.65	0,725
50465	87	17	247	0.80	77	26	28.84	11,145
103665	87	13	58	0.66	77	26	27.85	2,063
193665	11	40	0.58	77	27	27.41	1,196	
243665	85	9	157	0.50	77	26	26.78	4,161
23065	88	10	56	0.54	77	27	27.13	1,553
73665	89	8	39	0.46	77	27	26.35	0,863
30065	76	17	69	0.80	77	24	28.84	3,124
71265	73	17	144	0.80	77	23	28.84	6,613
141065	75	17	108	0.80	77	24	28.84	4,869
211065	74	15	51	0.73	77	23	28.41	1,996
1811065	66	10	45	0.54	77	21	27.13	1,179
21265	62	9	39	0.50	77	20	26.78	0,922
91265	58	10	43	0.54	77	19	27.13	1,108
141265	58	8	140	0.46	77	19	26.35	3,098
40156	56	15	88	0.82	77	19	25.48	3,611
110166	55	13	76	0.72	77	18	25.25	2,565
200166	55	55	88	2.49	77	18	28.91	7,033
240166	41	44	732	2.05	77	15	28.36	8,755
112266	54	11	384	0.63	77	18	24.69	4,147
152266	55	71	986	3.09	77	18	29.69	455,307
251266	49	45	483	2.04	77	17	28.42	189,131
32366	50	16	426	0.87	77	17	25.57	133,360
93366	51	75	734	3.24	77	18	29.84	185,191
173366	58	61	435	2.72	77	19	29.21	71,055
232366	64	38	67	1.01	77	21	27.94	6,812
313366	63	27	66	1.35	77	20	27.05	4,765
193466	68	14	45	0.77	77	22	25.37	1,675
32566	69	45	432	2.09	77	22	28.42	971,511
123466	71	54	5	2.45	77	22	28.87	417,679
263566	76	19	355	1.00	77	24	26.13	110,566
33666	76	13	281	0.73	77	24	25.25	85,695
82566	78	18	495	0.96	77	24	25.90	157,789
142566	82	10	160	0.58	77	25	24.48	45,681
232566	81	58	185	2.60	77	25	29.11	184,223
73766	84	23	210	1.18	77	26	26.59	18,412
143766	89	27	117	1.35	77	27	27.05	8,655
143766	89	24	145	1.22	77	27	26.75	9,407
243766	87	22	160	1.14	77	26	26.41	9,685
113866	86	16	73	0.87	77	26	25.57	3,197
353866	85	20	54	1.05	77	26	26.18	2,934
90966	84	12	47	0.68	77	26	24.87	1,545
230966	77	14	64	0.77	77	24	25.37	2,407
61066	74	15	56	0.82	77	23	25.48	2,254
161166	64	11	72	0.63	77	21	24.69	2,125
21166	63	14	51	0.77	77	20	25.37	1,928
301166	61	10	185	0.58	77	22	24.48	5,035
161266	50	14	120	0.77	77	17	25.37	4,628
281266	51	17	73	0.91	77	18	25.84	3,390
120167	44	30	129	1.26	77	16	30.73	10,463
270167	52	16	113	0.74	77	18	29.59	4,867
90267	49	18	115	0.81	77	17	30.07	5,542
240267	51	41	322	1.64	77	18	31.34	35,845
60367	58	26	120	1.11	77	19	30.63	8,581
240367	64	11	69	0.53	77	21	29.39	2,119
50467	70	27	41	1.15	77	22	30.60	3,039
200467	76	80	716	2.91	77	24	32.39	154,886
30567	70	81	798	2.94	77	22	32.42	175,128
180567	76	93	382	3.31	77	24	32.65	95,478
10667	75	67	299	2.50	77	24	32.10	54,579
200767	83	32	116	1.33	77	25	30.87	10,205
100867	92	12	43	0.58	77	28	29.08	1,345
240867	85	23	57	1.00	77	26	30.42	3,582
250967	82	27	408	1.15	77	25	30.60	2,929
91067	74	13	93	0.62	77	23	29.25	3,103
71167	58	19	78	0.85	77	19	30.09	4,055
201167	61	19	130	0.85	77	20	30.09	6,663
60168	65	13	43	0.94	77	21	20.77	1,574
180168	40	128	771	3.78	77	14	36.69	266,331
130268	49	94	258	3.13	77	17	33.99	65,501
130368	55	54	425	2.23	77	18	29.64	62,057
110468	63	150	165	4.16	77	20	38.18	876,810
180468	69	159	306	4.31	77	22	38.74	131,848
240468	70	153	607	4.21	77	22	38.37	250,892
290568	75	180	611	4.65	77	24	39.94	296,897
120668	81	146	416	4.09	77	25	37.94	163,986
230668	82	139	287	3.97	77	25	37.47	107,872
230768	83	61	233	2.40	77	25	30.57	38,445
50868	48	27	343	1.46	77	17	24.97	25,285
40968	81	16	69	1.06	77	25	21.95	3,125
50968	80	9	69	0.75	77	25	18.98	1,683
71068	75	25	248	1.40	77	24	24.44	16,768
231068	71	23	110	1.33	77	22	23.94	6,888
181168	58	17	57	1.10	77	19	22.28	2,667
261268	48	94	391	3.13	77	17	33.99	99,134
270169	48	47	219	1.69	77	17	33.07	28,362
160169	50	174	328	4.39	77	17	41.25	55,044
120269	50	97	1012	2.87	77	17	37.35	266,644
180269	49	88	323	2.67	77	17	36.77	76,916
260269	50	129	721	3.53	77	17	39.21	250,988
50369	49	187	2347	4.63	77	17	41.74	185,111
170369	50	152	1212	3.98	77	17	40.31	497,430
230469	65	118	327	3.31	77	21	38.61	104,235

RED RIVER ABOVE OLD RIVER

DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	F	CFS	PPM	F/S	10-7	10-3	FT	T/D
		1000						1000
10569	66	90	160	2.71	77	21	36.94	39,147
70569	67	98	677	2.89	77	21	37.43	179,976
220569	72	145	1400	3.84	77	23	40.02	547,939
20669	77	106	1158	3.06	77	24	37.93	331,264
160669	81	56	411	1.92	77	25	34.07	63,071
300669	87	23	128	1.00	77	26	29.38	8,071
140769	87	12	74	0.62	77	26	26.32	2,504
40869	86	34	125	1.33	77	26	31.38	11,566
250869	84	14	24	0.70	77	26	26.92	8,722
110969	83	13	134	0.66	77	25	26.67	5,021
260969	77	40	224	1.50	77	24	32.22	24,674
61069	78	8	3	0.46	77	24	24.63	0,056
171169	61	16	108	0.77	77	20	27.57	4,909
31169	64	26	100	1.10	77	21	29.88	10,363
81269	51	36	342	1.37	77	18	31.64	33,257
221269	50	23	2220	1.00	77	17	29.38	629,436
50170	44	174	1798	4.57	77	16	44.36	456,221
260170	45	67	271	2.24	77	16	36.70	49,343
90270	48	64	418	2.17	77	17	36.32	73,009
240270	51	57	254	1.99	77	18	35.49	39,656
90370	55	122	2572	3.51	77	18	41.31	847,177
230370	54	141	287	3.91	77	18	42.52	112,979
60470	59	101	314	3.05	77	19	39.77	85,637
240470	64	81	133	2.58	77	21	38.12	29,312
130570	70	92	242	2.84	77	22	39.08	62,228
200570	75	69	80	2.29	77	24	36.92	14,998
150670	80	66	82	2.22	77	25	36.54	14,716
10770	87	23	127	1.01	77	26	29.64	8,182
130770	88	16	99	0.77	77	27	27.59	4,462
270770	85	12	61	0.62	77	26	26.08	2,082
100870	88	9	108	0.50	77	27	24.64	2,468
240870	86	11	194	0.58	77	26	25.67	6,190
210970	86	9	110	0.50	77	26	24.64	2,861
51070	77	14	79	0.70	77	24	26.76	3,045
221070	65	42	598	1.58	77	21	33.46	68,264
121170	61	127	135	3.61	77	20	41.69	46,348
40171	52	174	96	4.54	77	18	45.85	11,527
260171	54	35	73	1.42	77	18	31.95	6,932
240271	56	49	117	1.81	77	19	34.49	15,541
100371	56	49	468	1.81	77	19	34.49	62,307
10471	60	26	108	1.10	77	20	30.74	20,427
130471	65	40	0	1.56	77	21		

SINME SPORT									
DATE	TM	DIS	SEO	VEL	SLP	SVEL	DEP	TSED	
F	CFS	PPM	F/S	F/S	F/S	FT	T/D	1000	
		1000	10-7		10-3				
11062	75	100	242	2.57	53	20	33.58	65.000	
21262	75	98	220	2.54	53	20	33.42	58.000	
31062	70	98	214	2.54	53	20	33.42	56.000	
41262	69	98	217	2.54	53	20	33.42	57.000	
51262	69	96	220	2.51	53	20	33.26	57.000	
61062	69	96	228	2.51	53	20	33.26	59.000	
71262	70	96	224	2.51	53	20	33.26	58.000	
81062	70	98	216	2.54	53	20	33.42	57.000	
91262	70	101	210	2.58	53	20	33.73	57.000	
101062	69	104	215	2.63	53	20	33.87	60.000	
111262	70	108	259	2.69	53	20	34.14	76.000	
121262	69	111	236	2.73	52	20	34.40	71.000	
131262	69	113	236	2.76	53	20	34.51	69.000	
141062	69	113	237	2.76	53	20	34.51	85.000	
151262	65	112	203	2.74	53	20	34.53	93.000	
161262	65	109	297	2.70	53	20	34.27	87.000	
171262	65	108	257	2.69	53	20	34.14	75.000	
181062	65	106	237	2.66	53	20	34.00	68.000	
191062	65	106	227	2.66	53	20	34.00	65.000	
201062	64	113	280	2.76	53	20	34.51	70.000	
211262	64	121	378	2.87	53	20	35.08	123.000	
221262	65	122	729	2.89	53	20	35.06	240.000	
231262	64	122	670	2.89	53	20	35.06	221.000	
241262	66	119	471	2.84	53	20	34.98	151.000	
251262	66	119	332	2.84	53	20	34.98	107.000	
261062	65	121	293	2.87	53	20	35.08	96.000	
271262	64	121	253	2.87	53	20	35.08	83.000	
281262	64	119	242	2.84	53	20	34.98	78.000	
291062	68	116	230	2.80	53	20	34.75	72.000	
301062	67	112	219	2.74	53	20	34.53	66.000	
311262	65	107	203	2.67	53	20	34.15	59.000	
111062	64	102	192	2.60	53	20	33.73	53.000	
211062	69	98	190	2.54	53	20	33.42	50.000	
311062	69	96	192	2.51	53	20	33.26	50.000	
411062	69	96	195	2.51	53	20	33.26	50.000	
511062	67	98	203	2.54	53	20	33.42	54.000	
611262	65	99	248	2.55	53	20	33.58	66.000	
711262	63	98	273	2.54	53	20	33.42	72.000	
811062	62	97	258	2.52	53	20	33.42	68.000	
911062	61	96	228	2.51	53	20	33.26	59.000	
1011062	59	96	216	2.51	53	20	33.26	56.000	
1111062	63	95	228	2.49	53	20	33.26	58.000	
1211062	64	95	268	2.49	53	20	33.26	69.000	
1311062	66	95	263	2.49	53	20	33.26	67.000	
1411062	67	94	249	2.48	53	20	33.10	63.000	
1511062	61	94	209	2.48	53	20	33.10	53.000	
1611062	59	92	190	2.44	53	20	33.08	47.000	
1711062	59	93	177	2.46	53	20	33.09	44.000	
1811062	56	94	169	2.48	53	20	33.10	43.000	
1911062	59	96	171	2.51	53	20	33.26	44.000	
2011062	58	100	178	2.57	53	20	33.58	48.000	
2111062	55	105	200	2.64	53	20	34.01	57.000	
2211062	55	110	221	2.72	53	20	34.26	66.000	
2311062	56	116	251	2.80	53	20	34.75	79.000	
2411062	56	119	261	2.84	53	20	34.98	84.000	
2511062	56	122	267	2.89	53	20	35.06	88.000	
2611062	55	123	267	2.90	53	20	35.18	89.000	
2711062	55	122	266	2.89	53	20	35.06	88.000	
2811062	55	122	258	2.89	53	20	35.06	85.000	
2911062	55	120	248	2.86	53	20	34.96	80.000	
3011062	55	118	227	2.83	53	20	34.86	72.000	
11262	55	117	218	2.82	53	20	34.74	69.000	
21262	55	122	230	2.89	53	20	35.06	76.000	
31262	55	128	451	2.97	53	20	35.47	156.000	
41262	55	132	102	3.02	53	20	35.77	193.000	
51262	55	135	53	3.06	53	20	35.95	181.000	
61262	55	134	756	3.05	53	20	35.84	274.000	
71262	54	138	572	3.05	53	20	35.84	207.000	
81262	54	133	431	3.04	53	20	35.74	155.000	
91262	56	126	410	2.94	53	20	35.38	139.000	
101262	60	119	398	2.84	53	20	34.98	128.000	
111262	60	110	396	2.72	53	20	34.76	118.000	
121262	60	108	383	2.69	53	20	34.14	112.000	
131262	53	105	356	2.64	53	20	34.01	101.000	
141262	53	98	302	2.54	53	20	33.42	80.000	
151262	53	90	259	2.54	53	20	33.42	68.000	
161262	53	97	210	2.52	53	20	33.42	55.000	
171262	60	96	198	2.51	53	20	33.26	51.000	
181262	60	94	191	2.48	53	20	33.10	49.000	
191262	61	93	180	2.46	53	20	33.09	45.000	
201262	59	90	174	2.41	53	20	32.90	42.000	
211262	58	87	254	2.37	53	20	32.53	60.000	
221262	56	83	247	2.30	53	20	32.29	55.000	
231262	45	80	231	2.25	53	20	32.04	50.000	
241262	45	77	210	2.20	53	20	31.77	44.000	
251262	45	77	190	2.20	53	20	31.77	40.000	
261262	45	77	170	2.20	53	20	31.77	36.000	
271262	45	77	150	2.20	53	20	31.77	31.000	
281262	45	80	149	2.24	53	20	32.04	32.000	
291262	44	84	151	2.32	53	20	32.31	34.000	
301262	44	91	182	2.43	53	20	32.91	45.000	
311262	44	98	213	2.54	53	20	33.42	56.000	
10163	55	103	215	2.57	53	18	33.04	60.000	
20163	42	107	192	2.63	53	20	33.38	55.000	
30163	40	112	208	2.71	53	10	33.73	63.000	
40163	42	118	235	2.80	53	20	34.18	75.000	
50163	44	124	226	2.89	53	20	34.55	76.000	
60163	45	126	216	2.92	53	20	34.73	73.000	
70163	44	126	221	2.92	53	20	34.73	75.000	
80163	44	126	227	2.92	53	20	34.73	77.000	
90163	44	123	227	2.90	53	20	34.48	74.000	
100163	45	122	213	2.96	53	20	34.46	70.000	
110163	48	125	199	2.91	53	20	34.61	67.000	
120163	47	126	205	2.92	53	20	34.73	70.000	

SINME SPORT									
DATE	TM	DIS	SEO	VEL	SLP	SVEL	DEP	TSED	
F	CFS	PPM	F/S	F/S	F/S	FT	T/D	1000	
		1000	10-7		10-3				
130163	46	127	239	2.94	53	20	34.74	82.000	
140163	41	124	242	2.89	53	20	34.59	81.000	
150163	39	115	229	2.76	53	10	33.91	71.000	
160163	41	107	205	2.63	53	20	33.38	59.000	
170163	43	101	194	2.54	53	20	32.86	53.000	
180163	45	99	188	2.51	53	20	32.68	51.000	
190163	44	99	188	2.51	53	20	32.68	51.000	
200163	44	107	210	2.63	53	20	33.38	63.000	
210163	43	107	269	2.63	53	20	33.38	78.000	
220163	42	105	269	2.60	53	20	33.21	76.000	
230163	43	106	265	2.62	53	20	33.25	76.000	
240163	40	106	256	2.62	53	10	33.25	73.000	
250163	38	108	227	2.65	53	10	33.41	66.000	
260163	38	113	214	2.73	53	10	33.76	65.000	
270163	39	115	220	2.76	53	10	33.91	68.000	
280163	39	115	226	2.76	53	10	33.91	70.000	
290163	39	114	216	2.74	53	10	33.88	66.000	
300163	39	112	191	2.71	53	10	33.73	58.000	
310163	41	111	175	2.70	53	20	33.60	52.000	
10263	42	107	204	2.63	53	20	33.38	59.000	
20263	44	101	202	2.54	53	20	32.86	55.000	
30263	43	94	188	2.42	53	20	32.36	49.000	
40263	43	88	173	2.32	53	20	31.85	41.000	
50263	40	85	164	2.27	53	10	31.57	38.000	
60263	40	82	153	2.22	53	10	31.22	34.000	
70263	43	81	148	2.20	53	20	31.22	33.000	
80263	44	80	142	2.19	53	20	31.04	31.000	
90263	42	80	138	2.19	53	20	31.04	30.000	
100263	43	80	129	2.19	53	20	31.04	28.000	
110263	44	83	129	2.24	53	20	31.34	29.000	
120263	40	86	129	2.29	53	10	31.63	30.000	
130263	41	91	129	2.37	53	20	32.11	32.000	
140263	41	96	131						

SINME SPORT

DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	10-7	10-3	FT	T/D	1000
270463	68	148	279	3.24	53	20	36.08	111.000
280463	67	139	271	3.11	53	20	35.55	102.000
290463	69	132	249	3.01	53	20	35.10	89.000
300463	70	127	245	2.94	53	20	34.74	84.000
10563	68	126	221	2.92	53	20	34.73	75.000
20563	68	127	211	2.94	53	20	34.74	72.000
30563	69	138	222	3.10	53	20	35.45	83.000
40563	69	152	622	3.30	53	20	36.27	255.000
50563	58	161	42	3.42	53	20	36.81	453.000
60563	69	172	881	3.57	53	20	37.39	409.000
70563	69	183	680	3.71	53	20	37.99	336.000
80563	69	195	519	3.87	53	20	38.53	273.000
90563	69	202	456	3.96	53	20	38.84	249.000
100563	69	206	433	4.01	53	20	39.03	241.000
110563	70	204	390	3.98	53	20	38.98	215.000
120563	70	199	347	3.92	53	20	38.72	186.000
130563	71	191	304	3.82	53	20	38.33	157.000
140563	72	181	257	3.69	53	20	37.84	126.000
150563	74	166	226	3.49	53	20	37.06	101.000
160563	73	152	193	3.30	53	20	36.27	79.000
170563	75	139	181	3.11	53	20	35.55	68.000
180563	74	130	195	2.98	53	20	34.98	68.000
190563	74	121	249	2.85	53	20	34.34	81.000
200563	70	113	279	2.73	53	20	33.76	85.000
210563	75	108	299	2.65	53	20	33.41	87.000
220563	76	107	294	2.63	53	20	33.38	85.000
230563	74	107	280	2.63	53	20	33.38	81.000
240563	74	106	246	2.62	53	20	33.25	70.000
250563	76	110	252	2.68	53	20	33.57	75.000
260563	77	117	283	2.79	53	20	34.06	89.000
270563	77	127	304	2.94	53	20	34.74	104.000
280563	77	137	332	3.09	53	20	35.35	123.000
290563	75	144	336	3.19	53	20	35.78	131.000
300563	74	151	368	3.28	53	20	36.27	149.000
310563	75	153	385	3.31	53	20	36.36	159.000
10663	72	153	455	3.31	53	20	36.36	188.000
20663	72	151	514	3.28	53	20	36.27	210.000
30663	76	150	513	3.27	53	20	36.17	208.000
40663	75	151	492	3.28	53	20	36.27	201.000
50663	75	154	451	3.13	53	20	36.37	180.000
60663	75	156	400	3.35	53	20	36.55	168.000
70663	75	156	348	3.35	53	20	36.55	147.000
80663	76	154	292	3.31	53	20	36.37	121.000
90663	78	151	275	3.28	53	20	36.27	112.000
100663	77	146	263	3.21	53	20	35.97	104.000
110663	80	137	256	3.09	53	20	35.35	95.000
120663	79	127	229	2.94	53	20	34.74	79.000
130663	79	117	208	2.79	53	20	34.06	66.000
140663	81	109	208	2.66	53	20	33.54	61.000
150663	81	104	207	2.59	53	20	33.08	59.000
160663	81	101	197	2.54	53	20	32.86	54.000
170663	81	103	198	2.57	53	20	33.04	55.000
180663	82	106	198	2.62	53	20	33.25	57.000
190663	82	111	199	2.70	53	20	33.60	66.000
200663	83	115	190	2.76	53	20	33.91	59.000
210663	80	119	191	2.82	53	20	34.20	61.000
220663	93	121	191	2.85	53	30	34.34	62.000
230663	83	121	177	2.85	53	20	34.34	58.000
240663	82	120	178	2.83	53	20	34.32	58.000
250663	82	119	288	2.82	53	20	34.20	93.000
260663	82	115	282	2.76	53	20	33.51	86.000
270663	82	109	251	2.66	53	20	33.54	74.000
280663	82	102	260	2.55	53	20	33.00	72.000
290663	82	96	279	2.46	53	20	32.45	72.000
300663	82	91	293	2.37	53	20	32.11	72.000
10763	82	86	310	2.29	53	20	31.63	72.000
20763	82	83	283	2.24	53	20	31.34	64.000
30763	82	81	251	2.20	53	20	31.22	55.000
40763	82	79	211	2.17	53	20	30.97	45.000
50763	83	76	201	2.11	53	20	30.76	42.000
60763	82	74	191	2.06	53	20	30.50	38.000
70763	82	72	181	2.04	53	20	30.34	35.000
80763	82	71	171	2.02	53	20	30.26	33.000
90763	83	72	166	2.04	53	20	30.34	31.000
100763	83	73	161	2.06	53	20	30.42	32.000
110763	83	72	161	2.04	53	20	30.34	32.000
120763	83	68	163	1.97	53	20	29.89	30.000
130763	84	66	156	1.93	53	30	29.70	29.000
140763	84	65	149	1.91	53	30	29.61	26.000
150763	85	61	142	1.84	53	30	29.08	24.000
160763	85	59	223	1.80	53	30	28.86	36.000
170763	84	58	243	1.78	53	30	28.75	39.000
180763	84	61	263	1.84	53	30	29.08	44.000
190763	83	63	270	1.88	53	20	29.29	46.000
200763	84	65	278	1.91	53	30	29.61	49.000
210763	83	68	289	1.97	53	20	29.89	54.000
220763	83	72	289	2.04	53	20	30.34	56.000
230763	83	74	289	2.08	53	20	30.50	58.000
240763	83	75	248	2.10	53	20	30.57	60.000
250763	83	75	268	2.10	53	20	30.57	55.000
260763	83	76	217	2.11	53	20	30.76	45.000
270763	83	78	187	2.15	53	20	30.90	39.000
280763	82	79	179	2.17	53	20	30.97	38.000
290763	82	81	197	2.20	53	20	31.22	43.000
300763	82	83	216	2.24	53	20	31.34	48.000
310763	83	85	213	2.27	53	20	31.57	49.000
10863	85	83	201	2.24	53	30	31.34	45.000
20863	85	82	201	2.22	53	30	31.28	45.000
30863	83	70	205	2.15	53	20	30.50	44.000
40863	84	72	184	2.04	53	30	30.00	36.000
50863	84	70	153	2.01	53	30	30.06	29.000
60863	85	68	133	1.97	53	30	29.89	25.000
70863	85	67	123	1.95	53	30	29.80	23.000
80863	85	66	119	1.93	53	30	29.70	21.000

SINME SPORT

DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	10-7	10-3	FT	T/D	1000
90863	85	63	114	1.91	53	30	29.61	20.000
100863	86	65	110	1.91	53	30	29.61	20.000
110863	86	65	110	1.91	53	30	29.61	19.000
120863	85	65	111	1.91	53	30	29.61	19.000
130863	85	65	113	1.91	53	30	29.61	20.000
140863	85	65	111	1.91	53	30	29.61	19.000
150863	85	62	108	1.86	53	30	29.19	18.000
160863	84	58	106	1.78	53	30	28.75	17.000
170863	84	56	103	1.74	53	30	28.51	16.000
180863	84	55	99	1.72	53	30	28.39	15.000
190863	84	56	96	1.74	53	26	28.51	14.000
200863	84	54	91	1.70	53	20	28.26	13.000
210863	83	54	88	1.70	53	20	28.26	13.000
220863	83	54	84	1.70	53	20	28.26	12.000
230863	83	52	82	1.66	53	20	28.00	12.000
240863	84	49	81	1.60	53	30	27.57	11.000
250863	84	46	82	1.53	53	30	27.25	10.000
260863	85	45	83	1.51	53	30	27.08	10.000
270863	85	44	84	1.49	53	30	26.91	10.000
280863	86	44	87	1.49	53	30	26.91	8.000
290863	83	43	50	1.47	53	20	26.74	6.000
300863	85	42	46	1.45	53	30	26.56	5.000
310863	83	42	37	1.45	53	20	26.56	4.000
10963	83	42	44	1.45	53	20	26.56	5.000
20963	83	42	63	1.45	53	20	26.56	5.000
30963	83	42	43	1.45	53	20	26.56	7.000
40963	84	42	74	1.45	53	30	26.56	8.000
50963	82	42	84	1.45	53	20	26.56	10.000
60963	83	42	47	1.45	53	20	26.56	10.000
70963	82	43	102	1.47	53	20	26.74	12.000
80963	82	43	104	1.47	53	20	26.74	12.000
90963	82	43	104	1.47	53	20	26.74	12.000
100963	82	42	98	1.45	53	20	26.56	11.000
110963	82	42	98	1.45	53	20	26.56	11.000
120963	82	42	95	1.45	53	20	26.56	11.000
130963	82	42	83	1.45	53	20	26.56	10.000
140963	82	41	76	1.42	53	20	26.52	9.000
150963	82	39	66	1.38	53	20	26.13	7.000
160963	81	37	59	1.33	53	20	25.87	6.000
170963	81	38	55	1.36	53	20	25.92	6.000
180963	81	41	54	1.42	53	20	26.52	6.000
19								

SIMME SPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F	CFS	PPM	F/S	F/S	FT	FT	T/D	1000	
		10-7		10-3					
211163	59	29	52	1.14	53	20	24.35	4.000	
221163	58	32	48	1.21	53	20	25.01	4.000	
231163	55	30	47	1.17	53	20	24.47	4.000	
241163	54	27	43	1.09	53	20	23.92	3.000	
251163	54	27	39	1.09	53	20	23.92	3.000	
261163	54	28	37	1.12	53	20	24.05	3.000	
271163	54	28	37	1.12	53	20	24.05	3.000	
281163	55	30	43	1.17	53	20	24.47	4.000	
291163	58	30	53	1.17	53	20	24.47	4.000	
301163	58	31	71	1.19	53	20	24.74	6.000	
11263	58	32	70	1.21	53	20	25.01	6.000	
21263	54	33	60	1.24	53	20	25.10	5.000	
31263	54	34	55	1.26	53	20	25.34	5.000	
41263	54	36	58	1.31	53	20	25.65	6.000	
51263	54	35	60	1.29	53	20	25.42	6.000	
61263	53	33	63	1.24	53	20	25.10	6.000	
71263	54	34	67	1.26	53	20	25.34	6.000	
81263	53	36	69	1.31	53	20	25.65	7.000	
91263	53	36	89	1.31	53	20	25.65	9.000	
101263	52	36	98	1.31	53	20	25.65	10.000	
111263	49	39	99	1.38	53	20	26.13	11.000	
121263	47	41	98	1.42	53	20	26.52	11.000	
131263	46	43	93	1.47	53	20	26.74	11.000	
141263	45	44	83	1.49	53	20	26.91	10.000	
151263	47	44	80	1.49	53	20	26.91	10.000	
161263	47	45	82	1.51	53	20	27.08	10.000	
171263	48	46	94	1.53	53	20	27.25	12.000	
181263	49	46	134	1.53	53	20	27.25	17.000	
191263	48	46	124	1.53	53	20	27.25	16.000	
201263	50	46	114	1.53	53	20	27.25	14.000	
211263	50	46	104	1.53	53	20	27.25	13.000	
221263	47	46	98	1.53	53	20	27.25	12.000	
231263	48	44	93	1.49	53	20	26.91	11.000	
241263	48	43	91	1.47	53	20	26.74	11.000	
251263	48	42	88	1.45	53	20	26.56	10.000	
261263	47	41	83	1.42	53	20	26.52	9.000	
271263	50	39	79	1.38	53	20	26.13	8.000	
281263	49	36	77	1.31	53	20	25.65	8.000	
291263	48	34	73	1.26	53	20	25.34	7.000	
301263	47	33	65	1.24	53	20	25.10	6.000	
311263	45	30	55	1.17	53	20	24.47	5.000	
10164	40	99	51	2.99	53	10	28.38	4.000	
20164	40	29	50	1.40	53	10	20.70	4.000	
30164	43	29	51	1.40	53	10	20.70	4.000	
40164	40	28	53	1.37	53	10	20.51	4.000	
50164	40	28	53	1.37	53	10	20.51	4.000	
60164	40	27	54	1.34	53	10	20.32	4.000	
70164	42	27	56	1.34	53	10	20.32	4.000	
80164	40	31	59	1.46	53	10	21.04	5.000	
90164	39	33	63	1.52	53	10	21.36	6.000	
100164	44	33	74	1.52	53	10	21.36	7.000	
110164	40	37	87	1.63	53	10	22.01	9.000	
120164	39	39	108	1.68	53	10	22.35	11.000	
130164	42	41	138	1.73	53	10	22.67	15.000	
140164	39	41	159	1.73	53	10	22.67	18.000	
150164	40	43	179	1.79	53	10	22.86	23.000	
160164	39	52	251	2.01	53	10	24.04	35.000	
170164	40	64	315	2.28	53	10	25.40	54.000	
180164	40	73	395	2.48	53	10	26.21	78.000	
190164	39	81	444	2.64	53	10	26.96	97.000	
200164	40	83	425	2.68	53	10	27.14	95.000	
210164	41	84	361	2.70	53	10	27.22	82.000	
220164	39	82	312	2.66	53	10	27.05	69.000	
230164	45	80	278	2.62	53	10	26.88	60.000	
240164	42	79	252	2.60	53	10	26.79	54.000	
250164	46	78	220	2.58	53	10	26.70	46.000	
260164	47	77	206	2.56	53	10	26.60	43.000	
270164	45	73	200	2.48	53	10	26.21	39.000	
280164	47	66	195	2.33	53	10	25.55	35.000	
290164	45	67	190	2.24	53	10	25.16	32.000	
300164	48	60	185	2.19	53	10	24.99	30.000	
310164	48	60	175	2.19	53	10	24.99	28.000	
10264	48	61	171	2.22	53	10	25.03	28.000	
20264	48	66	182	2.33	53	10	25.55	32.000	
30264	48	71	240	2.43	53	10	26.10	46.000	
40264	45	75	272	2.52	53	10	26.41	55.000	
50264	47	81	278	2.64	53	10	26.96	61.000	
60264	47	85	282	2.72	53	10	27.30	65.000	
70264	44	87	275	2.76	53	10	27.46	65.000	
80264	48	87	262	2.76	53	10	27.46	62.000	
90264	45	85	250	2.72	53	10	27.30	57.000	
100264	44	82	225	2.66	53	10	27.05	50.000	
110264	47	82	210	2.66	53	10	27.05	46.000	
120264	44	81	190	2.64	53	10	26.96	42.000	
130264	50	76	170	2.54	53	10	26.51	35.000	
140264	48	71	160	2.43	53	10	26.10	31.000	
150264	50	67	161	2.35	53	10	25.66	29.000	
160264	46	64	162	2.28	53	10	25.40	28.000	
170264	50	63	167	2.26	53	10	25.28	28.000	
180264	45	67	176	2.35	53	10	25.66	32.000	
190264	46	70	181	2.41	53	10	25.99	34.000	
200264	47	73	196	2.48	53	10	26.21	37.000	
210264	47	75	205	2.52	53	10	26.41	42.000	
220264	48	76	224	2.54	53	10	26.51	46.000	
230264	47	78	239	2.58	53	10	26.70	50.000	
240264	44	82	250	2.66	53	10	27.05	55.000	
250264	46	89	270	2.80	53	10	27.61	65.000	
260264	44	96	285	2.93	53	10	28.19	74.000	
270264	47	101	310	3.02	53	10	28.58	85.000	
280264	47	104	330	3.08	53	10	28.76	91.000	
290264	48	105	370	3.10	53	10	28.82	105.000	
10364	48	106	445	3.12	53	10	29.07	127.000	
20364	48	116	17	3.79	53	10	29.62	319.000	
30364	47	131	225	3.55	53	10	30.54	433.000	

SIMME SPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F	CFS	PPM	F/S	F/S	FT	FT	T/D	1000	
		10-7		10-3					
40364	52	136	216	3.63	53	20	30.85	447.000	
50364	52	136	165	3.63	53	20	30.85	428.000	
60364	49	131	10	3.55	53	20	30.54	357.000	
70364	54	126	960	3.47	53	20	30.20	327.000	
80364	52	125	915	3.45	53	20	30.16	309.000	
90364	56	126	910	3.47	53	20	30.20	310.000	
100364	50	128	970	3.50	53	20	30.35	335.000	
110364	55	136	35	3.63	53	20	30.85	380.000	
120364	55	161	110	4.03	53	20	32.21	483.000	
130364	56	189	200	4.45	53	20	33.57	612.000	
140364	56	216	280	4.84	53	20	34.70	757.000	
150364	56	252	320	5.32	53	20	36.12	898.000	
160364	53	278	380	5.65	53	20	37.06	36.000	
170364	57	302	370	5.95	53	20	37.84	117.000	
180364	53	324	361	6.21	53	20	38.55	191.000	
190364	51	332	340	6.30	53	20	38.82	201.000	
200364	49	339	315	6.39	53	20	38.98	204.000	
210364	48	340	250	6.40	53	20	39.02	148.000	
220364	49	343	160	6.43	53	20	39.13	74.000	
230364	53	346	90	6.47	53	20	39.19	18.000	
240364	54	352	20	6.54	53	20	39.36	969.000	
250364	59	357	946	6.59	53	20	39.54	912.000	
260364	52	363	920	6.66	53	20	39.70	902.000	
270364	55	365	870	6.68	53	20	39.77	857.000	
280364	54	367	845	6.71	53	20	39.79	837.000	
290364	55	369	835	6.73	53	20	39.86	832.000	
300364	51	370	820	6.74	53	20	39.89	819.000	
310364	54	369	815	6.73	53	20	39.86	812.000	
10464	54	371	805	6.75	53	20	39.53	806.000	
20464	56	372	798	6.76	53	20	39.96	802.000	
30464	55	370	745	6.74	53	20	39.89	744.000	
40464	56	356	730	6.58	53	20	39.51	702.000	
50464	56	349	690	6.50	53	20	39.36	650.000	
60464	58	352	635	6.54	53	20	39.36	604.000	
70464	63	352							

SIMMSPORT									
DATE	TM	DIS	SED	VEL	SLP	SVFL	DEP	TSED	
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/O	
		1000				10-7 10-3		1000	
160664	84	26	183	1.31	53	30	20.11	13.000	
170664	81	27	177	1.34	53	20	20.32	13.000	
180664	81	26	166	1.31	53	20	20.11	12.000	
190664	85	19	144	1.08	53	30	18.54	7.000	
200664	82	18	122	1.04	53	20	18.35	6.000	
210664	83	15	112	0.93	53	20	17.50	5.000	
220664	83	13	91	0.85	53	20	16.89	3.000	
230664	83	12	76	0.81	53	20	16.53	2.000	
240664	87	11	71	0.77	53	30	16.12	2.000	
250664	83	13	66	0.85	53	20	16.89	2.000	
260664	83	17	66	1.01	53	20	17.99	3.000	
270664	82	23	68	1.21	53	20	19.55	4.000	
280664	82	24	74	1.25	53	20	19.66	5.000	
290664	83	37	97	1.63	53	20	22.01	10.000	
300664	82	48	330	1.91	53	20	21.58	43.000	
107664	84	49	374	1.94	53	30	23.65	49.000	
207664	83	47	390	1.89	53	20	23.40	49.000	
307664	82	49	390	1.94	53	20	23.65	52.000	
407664	82	47	390	1.89	53	20	23.40	49.000	
507664	82	46	454	1.86	53	20	23.33	56.000	
607664	83	41	510	1.73	53	20	22.67	56.000	
707664	83	38	574	1.65	53	20	22.24	59.000	
807664	83	40	594	1.71	53	20	22.46	64.000	
907664	83	50	605	1.96	53	20	23.81	82.000	
1007664	84	59	605	2.17	53	30	24.86	96.000	
1107664	83	51	585	1.98	53	20	23.98	81.000	
1207664	84	42	546	1.76	53	30	22.77	62.000	
1307664	84	35	506	1.57	53	30	21.76	48.000	
1407664	84	30	457	1.43	53	30	20.88	37.000	
1507664	85	24	414	1.25	53	30	19.66	27.000	
1607664	83	20	357	1.11	53	20	18.86	19.000	
1707664	85	20	278	1.11	53	20	18.86	15.000	
1807664	83	20	248	1.11	53	20	18.86	13.000	
1907664	83	23	239	1.21	53	20	19.55	15.000	
2007664	84	26	232	1.31	53	20	20.11	16.000	
2107664	86	38	236	1.65	53	20	22.24	24.000	
2207664	83	43	247	1.79	53	20	22.86	29.000	
2307664	84	45	252	1.84	53	30	23.14	31.000	
2407664	85	45	263	1.84	53	30	23.14	32.000	
2507664	83	45	268	1.84	53	20	23.14	33.000	
2607664	83	43	273	1.79	53	20	22.86	32.000	
2707664	85	44	292	1.81	53	30	23.06	34.000	
2807664	85	44	272	1.81	53	30	23.06	32.000	
2907664	84	41	262	1.73	53	30	22.67	29.000	
3007664	83	39	241	1.68	53	20	22.35	25.000	
3107664	87	38	210	1.65	53	30	22.24	22.000	
12864	84	36	178	1.60	53	30	21.88	17.000	
20464	83	35	162	1.57	53	20	21.76	15.000	
32664	86	33	150	1.52	53	30	21.36	13.000	
42464	84	31	144	1.46	53	30	21.04	12.000	
53664	83	30	138	1.43	53	20	20.88	11.000	
62464	84	30	142	1.43	53	30	20.88	12.000	
70864	86	32	148	1.49	53	30	21.20	13.000	
80864	83	43	150	1.79	53	20	22.86	17.000	
90864	84	44	153	1.81	53	30	23.06	18.000	
100864	84	43	156	1.79	53	30	22.86	18.000	
110864	85	42	162	1.76	53	30	22.77	18.000	
120864	85	42	171	1.76	53	30	22.77	19.000	
130864	86	44	177	1.81	53	30	23.06	21.000	
140864	84	46	176	1.86	53	30	23.33	22.000	
150864	84	47	173	1.89	53	30	23.40	22.000	
160864	84	47	167	1.89	53	30	23.40	21.000	
170864	84	47	160	1.89	53	30	23.40	20.000	
180864	84	47	156	1.89	53	30	23.40	20.000	
190864	83	47	149	1.89	53	20	23.40	19.000	
200864	84	47	141	1.89	53	30	23.40	18.000	
210864	83	49	137	1.94	53	20	23.65	18.000	
220864	83	51	131	1.98	53	20	23.98	18.000	
230864	82	48	129	1.91	53	20	23.58	17.000	
240864	83	44	128	1.81	53	20	23.06	15.000	
250864	81	42	113	1.76	53	20	22.77	13.000	
260864	81	42	107	1.76	53	20	22.77	12.000	
270864	81	40	101	1.71	53	20	22.46	11.000	
280864	84	38	100	1.65	53	30	22.24	10.000	
290864	83	40	98	1.71	53	20	22.46	11.000	
300864	80	43	98	1.79	53	20	22.86	11.000	
310864	84	46	101	1.86	53	30	23.33	13.000	
10964	82	42	109	1.76	53	20	22.77	12.000	
20964	84	45	116	1.84	53	30	23.14	14.000	
30964	84	49	124	1.94	53	30	23.65	16.000	
40964	86	49	145	1.94	53	30	23.65	19.000	
50964	84	54	159	2.05	53	30	24.35	23.000	
60964	81	54	172	2.05	53	20	24.35	25.000	
70964	80	45	186	1.84	53	20	23.14	23.000	
80964	84	43	199	1.79	53	30	22.86	23.000	
90964	83	46	201	1.86	53	20	23.33	25.000	
100964	80	44	193	1.81	53	20	23.06	22.000	
110964	84	39	160	1.68	53	30	22.35	17.000	
120964	80	40	128	1.71	53	20	22.46	14.000	
130964	79	31	113	1.46	53	20	21.04	9.000	
140964	81	33	112	1.52	53	20	21.36	10.000	
150964	79	36	114	1.60	53	20	21.88	11.000	
160964	79	41	129	1.73	53	20	22.67	14.000	
170964	77	44	135	1.81	53	20	23.06	16.000	
180964	79	45	131	1.84	53	20	23.14	16.000	
190964	78	44	133	1.81	53	20	23.06	16.000	
200964	78	46	135	1.86	53	20	23.33	17.000	
210964	79	47	140	1.89	53	20	23.40	18.000	
220964	83	49	144	1.94	53	20	23.65	19.000	
230964	83	51	150	1.98	53	20	23.98	21.000	
240964	83	51	157	1.98	53	20	23.98	22.000	
250964	78	51	166	1.98	53	20	23.98	23.000	
260964	83	50	175	1.96	53	20	23.81	24.000	
270964	83	49	186	1.94	53	20	23.65	25.000	

SIMMSPORT									
DATE	TM	DIS	SED	VEL	SLP	SVFL	DEP	TSED	
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/O	
		1000				10-7 10-3		1000	
280964	78	49	197	1.94	53	20	23.65	26.000	
290964	83	51	213	1.98	53	20	23.98	29.000	
300964	83	52	235	2.01	53	20	24.04	33.000	
11064	72	579	213	8.89	53	20	44.75	33.000	
21064	75	63	243	2.26	53	20	25.28	41.000	
31064	72	68	380	2.37	53	20	25.77	70.000	
41064	72	96	790	2.93	53	20	28.19	205.000	
51064	71	116	180	3.29	53	20	29.62	370.000	
61064	72	112	313	3.22	53	20	29.35	397.000	
71064	72	106	336	3.12	53	20	28.87	382.000	
81064	74	97	260	2.95	53	20	28.25	330.000	
91064	74	91	155	2.84	53	20	27.76	284.000	
101064	74	86	10	2.74	53	20	27.38	235.000	
111064	74	82	844	2.66	53	20	27.05	187.000	
121064	74	74	737	2.50	53	20	26.31	147.000	
131064	74	59	610	2.17	53	20	24.86	57.000	
141064	74	71	510	2.43	53	20	26.10	58.000	
151064	65	69	420	2.39	53	20	25.88	78.000	
161064	74	68	370	2.37	53	20	25.77	68.000	
171064	74	67	322	2.35	53	20	25.66	58.000	
181064	74	63	274	2.26	53	20	25.28	47.000	
191064	65	54	235	2.05	53	20	24.35	34.000	
201064	76	47	195	1.89	53	20	23.40	25.000	
211064	74	40	170	1.71	53	20	22.46	18.000	
221064	73	40	155	1.71	53	20	22.46	17.000	
231064	64	43	144	1.79	53	20	22.86	17.000	
241064	72	42	136	1.76	53	20	22.77	15.000	
251064	72	41	131	1.73	53	20	22.67	14.000	
261064	64	40	126	1.71	53	20	22.46	14.000	
271064	72	41	120	1.73	53	20	22.67	13.000	
281064	72	41	116	1.73	53	20	22.67	13.000	
291064	70	42	111	1.76	53	20	22.77	13.000	
301064	66	42	104	1.76	53	20	22.77	12.000	
311064	68</								

SIMME SPORT									SIMME SPORT								
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D	F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D
		1000			10-7	10-3		1000			1000			10-7	10-3		1000
100165	50	133	375	3.13	53	20	33.14	135.000	240465	65	429	550	6.62	53	20	41.68	637.000
110165	50	138	398	3.20	53	20	33.42	148.000	250465	65	430	470	6.63	53	20	41.70	546.000
120165	51	149	432	3.36	53	20	33.93	174.000	260465	65	427	410	6.60	53	20	41.65	473.000
130165	50	167	472	3.62	53	20	34.65	213.000	270465	65	424	401	6.57	53	20	41.59	459.000
140165	53	187	522	3.89	53	20	35.44	264.000	280465	65	434	425	6.67	53	20	41.77	498.000
150165	48	206	573	4.14	53	20	36.11	319.000	290465	64	424	440	6.57	53	20	41.59	504.000
160165	52	221	594	4.33	53	18	36.61	354.000	300465	63	421	480	6.54	53	20	41.53	546.000
170165	46	232	615	4.47	53	20	36.94	385.000	105055	63	419	580	6.52	53	20	41.49	656.000
180165	49	239	627	4.55	53	20	37.19	405.000	205055	65	416	688	6.49	53	20	41.44	773.000
190165	47	241	628	4.58	53	20	37.22	409.000	305055	65	411	790	6.44	53	20	41.34	877.000
200165	47	242	630	4.59	53	20	37.26	412.000	405055	65	406	889	6.39	53	20	41.24	975.000
210165	49	242	633	4.59	53	20	37.26	414.000	505055	65	397	860	6.30	53	20	41.05	922.000
220165	47	242	634	4.59	53	20	37.26	414.000	605055	66	387	835	6.20	53	20	40.84	872.000
230165	45	239	610	4.55	53	20	37.19	394.000	705055	67	374	785	6.07	53	20	40.54	793.000
240165	45	235	572	4.50	53	20	37.08	363.000	805055	67	363	725	5.95	53	20	40.34	711.000
250165	50	228	533	4.42	53	20	36.82	328.000	905055	67	354	673	5.86	53	20	40.11	643.000
260165	46	222	500	4.34	53	20	36.66	290.000	100365	65	382	760	6.15	53	21	40.73	815.000
270165	48	213	490	4.23	53	20	36.34	282.000	110565	67	337	581	5.67	53	20	39.77	529.000
280165	46	204	460	4.11	53	20	36.07	253.000	120565	67	333	538	5.63	53	20	39.66	484.000
290165	48	195	450	4.00	53	20	35.70	237.000	130565	67	328	510	5.58	53	20	39.52	452.000
300165	47	185	440	3.86	53	20	35.39	220.000	140565	69	322	490	5.51	53	20	39.41	426.000
310165	48	176	440	3.74	53	20	35.04	209.000	150565	68	305	0	6.18	53	22	40.75	39.000
10265	47	170	441	3.66	53	20	34.79	202.000	160565	65	313	465	5.41	53	20	39.19	393.000
20265	45	165	449	3.59	53	20	34.59	200.000	170565	71	309	461	5.37	53	20	39.07	385.000
30265	44	163	453	3.56	53	20	34.53	199.000	180565	71	306	454	5.33	53	20	39.03	375.000
40265	43	163	456	3.56	53	20	34.53	201.000	190565	72	295	438	5.21	53	20	38.73	349.000
50265	43	163	459	3.56	53	20	34.53	202.000	200565	73	284	432	5.08	53	20	38.48	331.000
60265	45	166	453	3.60	53	20	34.66	203.000	210565	73	274	415	4.97	53	20	38.18	307.000
70265	43	168	456	3.63	53	20	34.73	207.000	220565	73	264	406	4.85	53	20	37.92	289.000
80265	42	169	450	3.65	53	20	34.72	205.000	230565	73	253	392	4.74	53	20	37.69	270.000
90265	45	171	445	3.67	53	20	34.86	205.000	240565	74	245	394	4.62	53	20	37.39	254.000
100265	45	173	450	3.70	53	20	34.92	210.000	250565	75	235	377	4.50	53	20	37.08	239.000
110265	45	179	492	3.78	53	20	35.16	239.000	260565	75	225	371	4.38	53	24	36.74	225.000
120265	45	190	499	3.93	53	20	35.55	256.000	270565	75	216	363	4.27	53	20	36.43	212.000
130265	45	202	942	4.09	53	20	35.96	514.000	280565	76	208	356	4.16	53	20	36.22	200.000
140265	45	210	26	4.19	53	20	36.25	582.000	290565	75	201	357	4.07	53	20	35.98	199.000
150265	45	223	155	4.35	53	20	36.71	694.000	300565	75	195	362	4.00	53	20	35.70	191.000
160265	51	240	280	4.56	53	20	37.24	829.000	310565	75	191	374	3.94	53	20	35.61	193.000
170265	45	262	380	4.83	53	20	37.84	976.000	10065	77	187	388	3.89	53	20	35.44	196.000
180265	45	281	460	5.05	53	20	38.37	1089.000	20665	78	184	411	3.85	53	20	35.33	204.000
190265	48	298	493	5.24	53	20	38.83	1201.000	30665	78	186	419	3.88	53	20	35.38	210.000
200265	49	308	490	5.36	53	20	39.04	1239.000	40665	78	190	428	3.93	53	20	35.55	220.000
210265	48	318	480	5.47	53	20	39.28	1271.000	50665	78	193	409	3.97	53	20	35.66	213.000
220265	47	325	430	5.54	53	20	39.49	1255.000	60665	79	193	370	3.97	53	20	35.66	193.000
230265	48	330	375	5.60	53	20	39.58	1225.000	70665	79	191	363	3.94	53	20	35.61	187.000
240265	47	334	305	5.64	53	20	39.69	1177.000	80665	79	180	364	3.80	53	20	35.15	177.000
250265	46	336	220	5.66	53	20	39.75	1077.000	90665	78	169	380	3.65	53	20	34.72	173.000
260265	50	333	160	5.63	53	20	39.66	43.000	100665	77	168	414	3.63	53	20	34.73	168.000
270265	47	327	80	5.56	53	20	39.55	954.000	110665	79	163	492	3.63	53	20	34.73	223.000
280265	48	320	5	5.49	53	20	39.35	868.000	120665	79	169	577	3.65	53	20	34.72	263.000
10365	47	317	890	5.46	53	20	39.25	762.000	130665	78	173	652	3.70	53	20	34.92	305.000
20365	50	310	815	5.38	53	20	39.10	682.000	140665	79	180	646	3.80	53	20	35.15	333.000
30365	48	302	750	5.29	53	20	38.90	612.000	150665	78	184	710	3.85	53	20	35.33	353.000
40365	48	288	705	5.13	53	20	38.56	544.000	160665	78	189	728	3.92	53	20	35.49	377.000
50365	45	275	625	4.98	53	20	38.21	464.000	170665	78	192	745	3.96	53	20	35.60	386.000
60365	45	275	592	4.98	53	20	38.21	444.000	180665	79	194	750	3.98	53	20	35.72	393.000
70365	46	278	562	5.01	53	20	38.32	422.000	190665	79	200	726	4.06	53	20	35.92	392.000
80365	46	285	533	5.10	53	20	38.45	410.000	200665	78	203	693	4.10	53	20	36.02	380.000
90365	47	287	516	5.12	53	20	38.52	390.000	210665	78	205	759	4.13	53	20	36.05	420.000
100365	48	291	500	5.16	53	20	38.66	393.000	220665	78	200	712	4.06	53	20	35.92	384.000
110365	48	295	500	5.21	53	20	38.73	394.000	230665	80	192	665	3.96	53	20	35.60	345.000
120365	47	301	499	5.28	53	20	38.87	406.000	240665	78	184	503	3.85	53	20	35.33	250.000
130365	47	307	513	5.34	53	20	39.07	425.000	250665	78	177	484	3.75	53	20	35.11	231.000
140365	46	312	537	5.40	53	20	39.16	452.000	260665	79	173	462	3.70	53	20	34.92	216.000
150365	47	316	548	5.44	53	20	39.29	468.000	270665	81	170	454	3.66	53	20	34.79	208.000
160365	48	319	554	5.48	53	20	39.32	477.000	280665	79	166	442	3.60	53	20	34.66	198.000
170365	50	320	553	5.49	53	20	39.35	478.000	290665	79	160	438	3.52	53	20	34.38	189.000
180365	50	320	551	5.49	53	20	39.35	476.000	300665	79	156	436	3.46	53	20	34.24	184.000
190365	47	319	541	5.48	53	20	39.32	466.000	10765	79	151	435	3.39	53	20	34.01	177.000
200365	45	315	526	5.43	53	20	39.25	447.000	20765	80	147	433	3.33	53	20	33.85	175.000
210365	46	310	506	5.38	53	20	39.10	424.000	30765	83	145	415	3.20	53	20	33.77	162.000
220365	47	306	487	5.33	53	20	39.03	402.000	40765	83	142	386	3.26	53	20	33.60	148.000
230365	50	299	475	5.25	53	20	38.87	383.000	50765	81	138	367	3.20	53	20	33.42	137.000
240365	50	292	471														

SIMMESPORT									
DATE	TM	DIS	SFD	VEL	SLP	SVEL	DEP	TSED	
F		CFS	PPM	F/S		F/S	FT	T/O	
		1000			10-7	10-3		1000	
60865	83	120	559	2.93	53	20	32.48	181.000	
70865	84	111	559	2.78	53	30	32.66	168.000	
80865	83	100	547	2.60	53	20	31.42	148.000	
90865	83	90	534	2.43	53	20	30.79	130.000	
100865	80	82	530	2.29	53	20	30.22	117.000	
110865	82	77	505	2.20	53	20	24.85	105.000	
120865	82	75	490	2.17	53	20	29.62	99.000	
130865	80	73	491	2.13	53	20	29.49	97.000	
140865	81	71	472	2.09	53	20	29.36	90.000	
150865	81	69	455	2.05	53	20	29.23	85.000	
160865	81	67	412	2.01	53	20	29.08	75.000	
170865	80	66	380	2.00	53	20	28.88	68.000	
180865	80	65	345	1.98	53	20	28.80	61.000	
190865	81	66	320	2.00	53	20	28.80	57.000	
200865	81	67	290	2.01	53	20	29.08	52.000	
210865	82	65	240	1.98	53	20	28.80	42.000	
220865	83	64	215	1.96	53	20	28.72	37.000	
230865	83	63	192	1.94	53	20	28.64	33.000	
240865	83	62	175	1.92	53	20	28.55	29.000	
250865	83	61	143	1.90	53	20	28.46	24.000	
260865	83	61	120	1.90	53	20	28.46	20.000	
270865	83	60	98	1.88	53	20	28.37	16.000	
280865	83	59	67	1.86	53	20	28.27	11.000	
290865	82	58	64	1.84	53	20	28.18	10.000	
300865	83	58	60	1.84	53	20	28.18	9.000	
310865	82	58	57	1.84	53	20	28.18	9.000	
10965	83	58	56	1.84	53	20	28.18	9.000	
20965	83	58	54	1.84	53	20	28.18	8.000	
30965	83	58	54	1.84	53	20	28.18	8.000	
40965	83	60	56	1.88	53	20	28.37	9.000	
50965	82	62	58	1.92	53	20	28.55	10.000	
60965	83	64	62	1.96	53	20	28.72	11.000	
70965	83	66	65	2.00	53	20	28.88	12.000	
80965	82	69	71	2.05	53	20	29.23	13.000	
90965	79	74	78	2.15	53	20	29.56	16.000	
100965	82	86	227	2.36	53	20	30.52	53.000	
110965	80	99	242	2.59	53	20	31.29	65.000	
120965	80	106	248	2.70	53	20	31.77	71.000	
130965	79	107	244	2.72	53	20	31.79	70.000	
140965	79	107	225	2.72	53	20	31.79	65.000	
150965	79	109	196	2.75	53	20	31.93	59.000	
160965	79	113	192	2.82	53	20	32.10	57.000	
170965	79	118	198	2.90	53	20	32.36	63.000	
180965	80	125	219	3.00	53	20	32.81	74.000	
190965	80	133	250	3.13	53	20	33.14	90.000	
200965	80	141	272	3.25	53	20	33.51	104.000	
210965	79	147	294	3.33	53	20	33.85	117.000	
220965	78	151	306	3.39	53	20	34.01	125.000	
230965	78	155	320	3.45	53	20	34.16	134.000	
240965	78	157	334	3.48	53	20	34.24	142.000	
250965	78	154	358	3.43	53	20	34.17	147.000	
260965	77	152	394	3.41	53	24	34.01	162.000	
270965	77	151	455	3.39	53	20	34.01	186.000	
280965	75	152	550	3.41	53	20	34.01	226.000	
290965	74	155	600	3.45	53	20	34.16	251.000	
300965	75	163	640	3.56	53	20	34.53	282.000	
11065	76	175	670	3.73	53	20	34.67	317.000	
21065	75	185	66	3.86	53	20	35.39	33.000	
31065	75	194	110	3.98	53	20	35.72	58.000	
41065	75	200	715	4.06	53	20	35.92	386.000	
51065	69	203	711	4.10	53	20	36.02	390.000	
61065	67	204	670	4.11	53	20	36.07	369.000	
71065	67	207	529	4.15	53	20	36.16	295.000	
81065	68	208	407	4.16	53	20	36.22	229.000	
91065	66	206	89	4.14	53	20	36.11	50.000	
101065	65	209	103	4.18	53	20	36.20	58.000	
111065	65	195	440	4.00	53	20	35.70	232.000	
121065	65	185	713	3.86	53	20	35.39	366.000	
131065	65	176	942	3.74	53	20	35.04	448.000	
141065	65	170	99	3.66	53	20	34.79	544.000	
151065	66	164	127	3.58	53	20	34.52	499.000	
161065	66	158	99	3.49	53	20	34.31	469.000	
171065	65	152	38	3.41	53	20	34.01	456.000	
181065	65	148	906	3.35	53	20	33.85	362.000	
191065	65	143	710	3.27	53	20	33.69	274.000	
201065	64	137	567	3.19	53	20	33.33	210.000	
211065	65	131	460	3.10	53	20	33.04	163.000	
221065	64	125	383	3.00	53	20	32.81	129.000	
231065	64	120	312	2.93	53	20	32.48	101.000	
241065	65	116	271	2.86	53	20	32.34	85.000	
251065	63	113	240	2.82	53	20	32.10	73.000	
261065	65	111	215	2.78	53	20	32.06	64.000	
271065	63	110	205	2.77	53	20	31.95	61.000	
281065	67	110	194	2.77	53	20	31.95	58.000	
291065	67	110	189	2.77	53	20	31.95	56.000	
301065	65	110	184	2.77	53	20	31.95	55.000	
311065	64	110	189	2.77	53	20	31.95	56.000	
11165	64	109	189	2.75	53	20	31.93	55.000	
21165	64	105	193	2.69	53	20	31.65	55.000	
31165	64	101	193	2.62	53	20	31.45	53.000	
41165	64	97	148	2.55	53	20	31.23	49.000	
51165	64	93	103	2.49	53	20	30.89	46.000	
61165	64	90	178	2.43	53	20	30.79	43.000	
71165	64	87	173	2.38	53	20	30.56	41.000	
81165	64	82	163	2.29	53	20	30.72	36.000	
91165	64	81	153	2.27	53	20	30.17	33.000	
101165	64	80	143	2.26	53	20	30.01	31.000	
111165	63	79	138	2.24	53	20	29.96	29.000	
121165	65	79	133	2.24	53	20	29.96	28.000	
131165	64	78	128	2.22	53	20	29.90	27.000	
141165	67	78	124	2.22	53	20	29.90	26.000	
151165	65	77	118	2.20	53	20	29.85	25.000	
161165	67	77	119	2.20	53	20	29.85	25.000	
171165	67	77	119	2.20	53	20	29.85	25.000	

SIMMESPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F		CFS	PPM	F/S		F/S	FT	T/O	
		1000			10-7	10-3		1000	
181165	66	76	114	2.18	53	20	29.79	23.000	
191165	68	77	113	2.20	53	20	29.85	23.000	
201165	68	76	104	2.18	53	20	29.79	21.000	
211165	61	76	94	2.18	53	20	29.79	19.000	
221165	55	76	89	2.18	53	20	29.79	18.000	
231165	68	76	88	2.18	53	20	29.79	18.000	
241165	65	77	89	2.20	53	20	29.85	19.000	
251165	60	79	91	2.24	53	20	29.96	19.000	
261165	57	81	96	2.27	53	20	30.17	21.000	
271165	57	82	100	2.29	53	20	30.22	22.000	
281165	57	83	107	2.31	53	20	30.27	24.000	
291165	56	83	113	2.31	53	20	30.27	25.000	
301165	53	82	118	2.29	53	20	30.22	26.000	
11265	53	82	124	2.29	53	20	30.22	27.000	
21265	49	81	125	2.27	53	20	30.17	27.000	
31265	53	79	128	2.24	53	20	29.96	27.000	
41265	54	78	132	2.22	53	20	29.90	28.000	
51265	53	77	134	2.20	53	20	29.85	28.000	
61265	50	77	135	2.20	53	20	29.85	28.000	
71265	50	80	137	2.26	53	20	30.01	30.000	
81265	52	85	133	2.35	53	20	30.36	31.000	
91265	51	87	134	2.38	53	20	30.56	31.000	
101265	50	89	131	2.42	53	20	30.64	31.000	
111265	50	88	125	2.40	53	20	30.60	30.000	
121265	50	87	120	2.38	53	20	30.56	28.000	
131265	50	84	117	2.33	53	20	30.32	27.000	
141265	49	82	114	2.29	53	20	30.22	25.000	
151265	50	80	115	2.26	53	20	30.01	25.000	
161265	49	80	117	2.26	53	20	30.01	25.000	
171265	50	79	145	2.24	53	20	29.96	31.000	
181265	47	81	174	2.27	53	20	30.17	38.000	
191265	47	89	188	2.42	53	20	30.64	45.000	
201265	50	97	202	2.55	53	20	31.23	53.00	



SIMMP SPORT									
DATE	TM	DIS	SED	VFL	SLP	SVFL	DEP	TSED	
F	F	CFS	PPH	F/S	F/S	F/S	FT	T/D	
		1000		10-7	10-3			1000	
30366	43	122	747	3.55	53	20	30.03	46.000	
40366	44	119	675	3.50	53	16	29.84	217.000	
50366	44	110	583	3.35	53	20	29.20	73.000	
60366	45	105	531	3.27	53	20	28.78	51.000	
70366	48	102	479	3.21	53	20	28.62	32.000	
80366	47	103	425	3.23	53	20	28.68	18.000	
90366	46	100	411	3.18	53	20	28.42	11.000	
100366	46	101	385	3.20	53	20	28.42	5.000	
110366	47	90	360	3.00	53	20	27.60	87.000	
120366	47	84	332	2.89	53	20	27.05	75.000	
130366	46	76	316	2.73	53	20	26.36	65.000	
140366	48	64	317	2.48	53	20	25.15	55.000	
150366	44	66	330	2.53	53	20	25.29	59.000	
160366	44	91	390	3.02	53	20	27.67	96.000	
170366	43	72	468	2.65	53	20	25.96	91.000	
180366	51	182	925	4.42	53	20	33.64	58.000	
190366	52	198	560	4.64	53	20	34.36	99.000	
200366	51	199	630	4.65	53	20	34.43	39.000	
210366	54	199	710	4.65	53	20	34.43	81.000	
220366	52	200	695	4.66	53	20	34.50	70.000	
230366	55	194	650	4.58	53	20	34.23	40.000	
240366	47	189	610	4.52	53	20	33.94	11.000	
250366	54	185	550	4.46	53	20	33.79	75.000	
260366	55	181	470	4.41	53	20	33.56	30.000	
270366	49	177	405	4.36	53	20	33.32	94.000	
280366	57	172	270	4.29	53	20	33.06	25.000	
290366	57	160	195	4.12	53	20	32.42	84.000	
300366	56	149	164	3.96	53	20	31.79	66.000	
310366	56	137	152	3.78	53	20	31.06	56.000	
320366	56	127	149	3.63	53	20	30.37	51.000	
330366	57	132	152	3.71	53	20	30.68	54.000	
340366	59	137	172	3.78	53	20	31.06	65.000	
350366	58	143	235	3.87	53	20	31.44	91.000	
360366	50	138	385	3.80	53	20	31.08	43.000	
370366	55	135	470	3.75	53	20	30.93	71.000	
380366	57	131	520	3.69	53	20	30.66	84.000	
390366	57	126	540	3.61	53	20	30.34	84.000	
400366	57	120	565	3.52	53	20	29.88	83.000	
410366	56	115	580	3.43	53	20	29.60	80.000	
420366	58	111	575	3.37	53	20	29.25	172.000	
430366	57	108	560	3.32	53	20	29.02	163.000	
440366	54	105	545	3.27	53	20	28.78	155.000	
450366	59	113	525	3.40	53	20	29.42	160.000	
460366	59	121	511	3.53	53	20	30.00	167.000	
470366	59	121	510	3.53	53	20	30.00	167.000	
480366	60	124	530	3.58	53	20	30.19	177.000	
490366	60	128	565	3.64	53	20	30.48	195.000	
500366	59	136	625	3.77	53	20	30.95	230.000	
510366	60	159	860	4.11	53	20	32.33	369.000	
520366	60	182	868	4.42	53	20	33.64	918.000	
530366	60	190	650	4.53	53	20	34.01	846.000	
540366	60	197	150	4.62	53	20	34.37	612.000	
550366	59	204	710	4.71	53	20	34.70	391.000	
560366	61	224	567	4.96	53	20	35.62	343.000	
570366	63	245	539	5.21	53	20	36.53	357.000	
580366	65	267	570	5.47	53	20	37.37	411.000	
590366	64	294	920	5.77	53	20	38.38	750.000	
600366	64	309	450	5.93	53	20	38.92	210.000	
610366	64	321	590	6.05	53	20	39.38	378.000	
620366	65	347	690	6.32	53	20	40.22	583.000	
630366	64	335	780	6.20	53	20	39.81	610.000	
640366	65	341	800	6.26	53	20	40.02	657.000	
650366	64	349	750	6.34	53	20	40.28	649.000	
660366	65	357	710	6.42	53	20	40.54	644.000	
670366	65	365	850	6.50	53	20	40.78	823.000	
680366	66	372	950	6.57	53	20	40.99	959.000	
690366	66	379	967	6.64	53	20	41.19	13.000	
700366	65	387	600	6.71	53	20	41.47	672.000	
710366	66	392	410	6.76	53	20	41.61	492.000	
720366	67	391	270	6.75	53	20	41.58	341.000	
730366	67	388	120	6.72	53	20	41.50	173.000	
740366	69	381	920	6.65	53	20	41.31	946.000	
750366	69	378	867	6.63	53	20	41.16	885.000	
760366	69	378	815	6.63	53	20	41.16	832.000	
770366	69	377	760	6.62	53	20	41.13	774.000	
780366	69	376	735	6.61	53	20	41.10	746.000	
790366	69	376	720	6.61	53	20	41.10	731.000	
800366	68	372	705	6.57	53	20	40.99	708.000	
810366	69	368	689	6.53	53	20	40.87	685.000	
820366	70	354	635	6.39	53	20	40.44	607.000	
830366	70	340	575	6.25	53	20	39.98	528.000	
840366	69	341	535	6.26	53	20	40.02	493.000	
850366	70	344	505	6.29	53	20	40.12	469.000	
860366	70	346	480	6.31	53	20	40.18	448.000	
870366	70	348	455	6.33	53	20	40.25	428.000	
880366	70	349	440	6.34	53	20	40.28	415.000	
890366	70	348	470	6.33	53	20	40.25	442.000	
900366	70	345	492	6.30	53	20	40.15	456.000	
910366	70	333	445	6.18	53	20	39.74	400.000	
920366	71	318	400	6.02	53	20	39.27	343.000	
930366	75	303	390	5.86	53	20	38.75	319.000	
940366	74	302	380	5.85	53	20	38.71	310.000	
950366	75	269	375	5.49	53	20	37.47	272.000	
960366	75	253	366	5.31	53	20	36.81	250.000	
970366	75	236	355	5.11	53	20	36.10	213.000	
980366	76	219	305	4.90	53	20	35.39	180.000	
990366	76	204	216	4.71	53	20	34.70	130.000	
1000366	77	194	238	4.58	53	20	34.23	125.000	
1010366	77	185	258	4.46	53	20	33.79	129.000	
1020366	78	177	238	4.36	53	20	33.32	142.000	
1030366	78	170	239	4.26	53	20	32.97	137.000	
1040366	78	164	290	4.18	53	20	32.62	128.000	
1050366	78	161	276	4.13	53	20	32.51	120.000	

SIMME SPORT									
DATE	TM	DIS	SED	VEL	SLP	SVFL	DEP	TSED	
F	F	CFS	PPH	F/S	F/S	F/S	FT	T/D	
		1000		10-7	10-3			1000	
170666	78	159	262	4.11	53	20	32.33	112.000	
180666	78	159	244	4.11	53	20	32.33	105.000	
190666	78	159	226	4.11	53	20	32.33	97.000	
200666	79	160	208	4.12	53	20	32.42	90.000	
210666	78	158	200	4.09	53	20	32.32	85.000	
220666	78	155	207	4.05	53	20	32.12	87.000	
230666	78	154	224	4.03	53	20	32.11	93.000	
240666	78	163	315	4.16	53	20	32.61	139.000	
250666	79	155	370	4.05	53	20	32.12	155.000	
260666	79	156	440	4.06	53	20	32.21	185.000	
270666	78	156	550	4.06	53	20	32.21	232.000	
280666	78	150	635	3.98	53	20	31.81	257.000	
290666	78	142	713	3.86	53	20	31.34	273.000	
300666	79	135	690	3.75	53	20	30.93	252.000	
310666	83	127	655	3.63	53	20	30.37	225.000	
320666	83	117	615	3.47	53	20	29.68	194.000	
330666	83	109	560	3.33	53	20	29.16	165.000	
340666	85	102	505	3.21	53	20	28.62	139.000	
350666	82	97	445	3.13	53	20	28.15	117.000	
360666	81	93	390	3.05	53	20	27.90	98.000	
370666	85	90	350	3.00	53	20	27.60	85.000	
380666	86	88	310	2.96	53	20	27.46	74.000	
390666	81	85	280	2.91	53	20	27.13	64.000	
400666	84	85	262	2.91	53	20	27.13	60.000	
410666	85	86	235	2.92	53	20	27.31	55.000	
420666	85	87	220	2.94	53	20	27.38	52.000	
430666	85	87	209	2.94	53	20	27.38	49.000	
440666	85	85	174	2.91	53	20	27.13	40.000	
450666	86	83	169	2.87	53	20	26.97	38.000	
460666	86	79	175	2.79	53	20	26.63	37.000	
470666	86	76	240	2.73	53	20	26.36	49.000	
480666	86	74	300	2.69	53	20	26.16	60	

SIMME SPORT								
DATE	TM	OIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	F/S	F/S	FT	FT	T/D
		1000	10-7 10-3			1000		
290966	75	54	104	2.26	53	20	23.97	15,000
300966	74	55	109	2.28	53	20	24.12	16,000
11066	74	54	108	2.26	53	20	23.97	16,000
21066	73	53	106	2.24	53	20	23.81	15,000
31066	72	53	104	2.24	53	20	23.81	15,000
41066	71	52	101	2.21	53	20	23.75	14,000
51066	71	49	100	2.14	53	20	23.35	13,000
61066	69	47	101	2.09	53	20	23.09	13,000
71066	69	48	104	2.12	53	20	23.16	13,000
81066	68	51	108	2.19	53	20	23.58	15,000
91066	68	53	114	2.24	53	20	23.81	16,000
101066	69	52	122	2.21	53	20	23.75	17,000
111066	69	53	128	2.24	53	20	23.81	18,000
121066	69	58	137	2.35	53	20	24.46	21,000
131066	69	63	146	2.46	53	20	25.03	25,000
141066	69	65	151	2.51	53	20	25.17	27,000
151066	69	60	147	2.40	53	20	24.63	24,000
161066	69	54	142	2.26	53	20	23.97	21,000
171066	68	50	135	2.17	53	20	23.41	18,000
181066	68	50	119	2.17	53	20	23.41	16,000
191066	68	48	113	2.12	53	20	23.16	15,000
201066	68	51	114	2.19	53	20	23.58	16,000
211066	67	53	114	2.24	53	20	23.81	16,000
221066	65	55	115	2.28	53	20	24.12	17,000
231066	65	56	118	2.31	53	20	24.17	18,000
241066	65	56	120	2.31	53	20	24.17	18,000
251066	63	56	124	2.31	53	20	24.17	19,000
261066	63	56	126	2.31	53	20	24.17	19,000
271066	65	57	127	2.33	53	20	24.31	20,000
281066	63	58	125	2.35	53	20	24.46	20,000
291066	63	60	124	2.40	53	20	24.63	20,000
301066	62	62	119	2.44	53	20	24.90	20,000
311066	62	64	116	2.48	53	20	25.15	20,000
11166	63	62	111	2.44	53	20	24.90	19,000
21166	61	56	106	2.31	53	20	24.17	16,000
31166	65	53	102	2.24	53	20	23.81	15,000
41166	61	51	102	2.19	53	20	23.58	14,000
51166	61	48	103	2.12	53	20	23.16	13,000
61166	61	47	106	2.09	53	20	23.09	13,000
71166	62	44	111	2.02	53	20	22.62	13,000
81166	62	43	114	1.99	53	20	22.52	13,000
91166	62	45	120	2.04	53	20	22.82	15,000
101166	62	47	131	2.09	53	20	23.09	17,000
111166	64	50	137	2.17	53	20	23.41	18,000
121166	64	59	147	2.37	53	20	24.60	23,000
131166	63	58	163	2.35	53	20	24.46	26,000
141166	62	58	178	2.35	53	20	24.46	28,000
151166	60	60	201	2.40	53	20	24.63	33,000
161166	63	63	214	2.46	53	20	25.03	36,000
171166	63	67	224	2.55	53	20	25.41	41,000
181166	63	69	230	2.59	53	20	25.64	43,000
191166	63	72	240	2.65	53	20	25.96	47,000
201166	61	75	244	2.71	53	20	26.26	49,000
211166	63	79	246	2.79	53	20	26.63	52,000
221166	63	83	247	2.87	53	20	26.97	56,000
231166	62	86	247	2.92	53	20	27.31	57,000
241166	62	89	239	2.98	53	20	27.53	57,000
251166	60	90	230	3.00	53	20	27.60	56,000
261166	62	90	225	3.00	53	20	27.60	55,000
271166	60	86	212	2.92	53	20	27.31	49,000
281166	58	79	199	2.75	53	20	26.63	42,000
291166	58	71	176	2.63	53	20	25.85	34,000
301166	57	66	166	2.53	53	20	25.29	30,000
11266	57	62	146	2.44	53	20	24.90	24,000
21266	52	60	132	2.40	53	20	24.63	21,000
31266	53	58	123	2.35	53	20	24.46	19,000
41266	55	55	121	2.28	53	20	24.12	18,000
51266	53	55	120	2.28	53	20	24.12	18,000
61266	52	57	123	2.33	53	20	24.31	19,000
71266	53	59	128	2.37	53	20	24.60	20,000
81266	54	61	140	2.42	53	20	24.77	23,000
91266	54	68	146	2.57	53	20	25.52	27,000
101266	54	76	158	2.73	53	20	26.36	32,000
111266	53	35	169	1.78	53	20	21.22	39,000
121266	53	89	180	2.98	53	20	27.53	43,000
131266	52	91	191	3.02	53	20	27.67	47,000
141266	53	92	202	3.04	53	20	27.74	50,000
151266	55	93	224	3.05	53	20	27.90	56,000
161266	51	97	245	3.13	53	20	28.15	64,000
171266	52	108	296	3.32	53	20	29.02	86,000
181266	51	124	388	3.58	53	20	30.19	130,000
191266	50	140	469	3.83	53	20	31.21	177,000
201266	49	154	480	4.03	53	20	32.11	190,000
211266	48	165	472	4.19	53	20	32.70	210,000
221266	50	173	453	4.30	53	20	33.15	212,000
231266	49	178	445	4.37	53	20	33.40	214,000
241266	48	180	428	4.40	53	20	33.48	208,000
251266	48	182	401	4.42	53	20	33.64	197,000
261266	49	183	385	4.44	53	20	33.64	190,000
271266	47	182	360	4.42	53	20	33.64	177,000
281266	49	185	345	4.46	53	20	33.79	172,000
291266	48	185	340	4.46	53	20	33.79	170,000
301266	53	185	314	4.46	53	20	33.79	167,000
311266	50	188	340	4.50	53	20	33.64	173,000
10167	44	99	345	3.04	51	20	23.62	162,000
20167	44	171	365	3.99	53	20	30.99	169,000
30167	43	169	382	3.96	53	20	31.05	174,000
40167	43	165	399	3.92	53	20	30.44	178,000
50167	43	158	402	3.83	51	20	30.02	171,000
60167	43	154	402	3.78	53	20	29.69	167,000
70167	43	155	384	3.80	53	20	29.50	161,000
80167	43	156	370	3.81	53	20	29.68	156,000
90167	43	157	355	3.82	53	20	29.85	150,000
100167	42	157	329	3.92	53	20	29.85	139,000

SIMME SPORT								
DATE	TM	OIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPM	F/S	F/S	F/S	FT	FT	T/D
		1000	10-7 10-3			1000		
110167	41	152	303	3.76	53	20	29.33	124,000
120167	41	147	276	3.70	53	20	28.78	110,000
130167	44	141	268	3.62	53	20	28.33	102,000
140167	45	135	253	3.54	53	20	27.82	92,000
150167	45	129	242	3.46	53	20	27.22	84,000
160167	43	123	238	3.38	53	20	26.55	79,000
170167	43	116	229	3.29	53	20	25.53	72,000
180167	42	109	214	3.17	53	20	24.82	62,000
190167	42	100	206	3.05	53	20	23.92	56,000
200167	42	94	197	2.96	53	20	23.11	50,000
210167	43	90	190	2.90	53	20	22.50	46,000
220167	43	86	183	2.83	53	20	22.18	42,000
230167	44	82	180	2.77	53	20	21.43	40,000
240167	46	80	169	2.73	53	20	21.39	37,000
250167	45	78	161	2.70	53	20	20.97	34,000
260167	47	76	154	2.66	53	20	20.90	32,000
270167	46	74	140	2.63	53	20	20.44	28,000
280167	47	71	133	2.57	53	20	20.25	26,000
290167	47	69	120	2.54	53	20	19.74	22,000
300167	48	67	107	2.50	53	20	19.57	19,000
310167	47	67	102	2.50	53	20	19.57	18,000
10267	48	68	105	2.52	53	20	19.66	19,000
20267	48	71	120	2.57	53	20	20.25	23,000
30267	50	74	142	2.63	53	20	20.44	28,000
40267	52	81	155	2.75	53	20	21.41	34,000
50267	52	89	177	2.88	53	20	22.51	43,000
60267	48	99	199	3.04	53	20	23.62	53,000
70267	50	108	217	3.17	53	20	24.82	63,000
80267	47	115	235	3.29	53	20	25.53	74,000
90267	49	123	242	3.38	53	20	26.55	80,000
100267	48	130	250	3.48	53	20	27.09	88,000
110267	47	136	256	3.56	53	20	27.67	94,000
120267	46	140	257	3.61	53	20	28.13	97,000
130267	45	143	258	3.65	53	20	28.37	0.0
140267	45	146	254	3.68	53	20	28.95	100,000
150267	46	145	254	3.67	53	20	28.76	99,000
160267	46	143	253	3.65	53	20	28.37	98,000
170267	47	140	253	3.61	53	20	28.13	96,000
180267	47	135	223	3.54	53	20	27.82	81,000
190267	46	129	205	3.46	53	20	27.22	71,000
200267	4							

SIMME SPORT									
DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
	F	CFS	PPM	F/S	F/S	F/S	FT	T/D	
		1000			10-7	10-3		1000	
250467	69	235	424	4.67	53	20	36.44	269.000	
260467	69	240	414	4.72	53	20	36.79	268.000	
270467	67	253	429	4.84	53	20	37.97	293.000	
280467	67	246	459	4.78	53	20	37.19	305.000	
290467	65	243	509	4.75	53	20	36.99	334.000	
300467	67	239	539	4.71	53	20	36.72	348.000	
10567	67	237	556	4.69	53	20	36.58	386.000	
20567	66	245	566	4.77	53	20	37.12	374.000	
30567	65	248	564	4.80	53	20	37.31	378.000	
40567	65	254	452	4.85	53	20	38.03	379.000	
50567	61	264	526	4.95	53	20	38.55	375.000	
60567	61	268	494	4.98	53	20	39.10	357.000	
70567	65	273	426	5.03	53	20	39.32	314.000	
80567	64	278	392	5.08	53	20	39.52	294.000	
90567	66	283	389	5.12	53	20	40.06	297.000	
100567	67	283	383	5.12	53	20	40.06	298.000	
110567	67	292	397	5.11	53	20	40.02	295.000	
120567	67	288	387	5.17	53	20	40.22	301.000	
130567	68	285	389	5.14	53	20	40.12	299.000	
140567	68	288	404	5.17	53	20	40.22	314.000	
150567	68	290	408	5.18	53	20	40.64	319.000	
160567	65	290	418	5.18	53	20	40.64	328.000	
170567	64	291	424	5.19	53	20	40.67	333.000	
180567	66	294	427	5.22	53	20	40.75	339.000	
190567	68	297	425	5.25	53	20	40.83	341.000	
200567	67	300	410	5.27	53	20	41.26	332.000	
210567	67	306	397	5.32	53	20	41.75	328.000	
220567	70	313	392	5.38	53	20	42.23	331.000	
230567	69	320	392	5.44	53	20	42.68	339.000	
240567	67	325	396	5.49	53	20	42.73	347.000	
250567	60	330	400	5.53	53	20	43.12	356.000	
260567	62	336	399	5.58	53	20	43.50	362.000	
270567	65	346	398	5.66	53	20	44.21	372.000	
280567	67	353	393	5.72	53	20	44.54	375.000	
290567	68	359	378	5.76	53	20	45.20	366.000	
300567	61	359	368	5.76	53	20	45.20	357.000	
310567	61	360	370	5.77	53	20	45.19	360.000	
10667	65	362	376	5.79	53	20	45.17	368.000	
20667	63	367	380	5.83	53	20	45.47	377.000	
30667	65	370	378	5.85	53	20	45.79	379.000	
40667	65	368	375	5.84	53	20	45.46	373.000	
50667	64	366	390	5.82	53	20	45.48	385.000	
60667	64	360	568	5.77	53	20	45.15	552.000	
70667	67	349	645	5.68	53	20	44.56	608.000	
80667	66	334	662	5.56	53	20	43.50	597.000	
90667	65	311	644	5.37	53	20	41.84	541.000	
100667	66	297	624	5.25	53	20	40.83	500.000	
110667	67	281	584	5.10	53	20	39.99	443.000	
120667	68	266	550	4.97	53	20	38.65	395.000	
130667	69	253	500	4.84	53	20	37.97	342.000	
140667	70	240	448	4.72	53	20	36.79	290.000	
150667	72	229	412	4.61	53	20	35.58	255.000	
160667	73	219	382	4.51	53	20	35.15	226.000	
171667	73	209	363	4.40	53	20	34.57	205.000	
181667	73	200	339	4.31	53	20	33.63	183.000	
191667	72	192	241	4.22	53	20	33.07	151.000	
201667	72	185	238	4.15	53	20	32.21	119.000	
210667	73	183	226	4.12	53	20	32.31	112.000	
220667	73	183	274	4.12	53	20	32.31	135.000	
230667	73	185	323	4.15	53	20	32.21	161.000	
240667	74	188	413	4.18	53	20	32.58	210.000	
250667	74	189	497	4.19	53	20	32.71	254.000	
260667	74	192	557	4.22	53	20	33.07	289.000	
270667	74	195	567	4.26	53	20	33.07	299.000	
280667	74	198	557	4.29	53	20	33.41	298.000	
290667	74	200	547	4.31	53	20	33.63	295.000	
300667	75	202	535	4.33	53	20	33.84	292.000	
10767	81	202	527	4.33	53	20	33.84	287.000	
20767	82	202	518	4.33	53	20	33.84	283.000	
30767	73	203	496	4.34	53	20	33.95	273.000	
40767	73	207	469	4.38	53	20	34.37	262.000	
50767	74	211	440	4.43	53	20	34.41	251.000	
60767	74	214	452	4.46	53	20	34.69	261.000	
70767	73	219	474	4.51	53	20	35.15	280.000	
80767	73	224	477	4.56	53	20	35.58	288.000	
90767	73	230	470	4.62	53	20	36.06	292.000	
100767	73	235	414	4.67	53	20	36.44	263.000	
110767	74	238	353	4.70	53	20	36.65	227.000	
120767	74	243	351	4.75	53	20	36.99	230.000	
130767	70	246	402	4.78	53	20	37.19	267.000	
140767	70	248	449	4.80	53	20	37.31	300.000	
150767	78	247	432	4.79	53	20	37.25	280.000	
160767	78	246	416	4.78	53	20	37.19	276.000	
170767	78	244	389	4.76	53	20	37.06	256.000	
180767	79	242	357	4.74	53	20	36.93	233.000	
190767	80	241	329	4.73	53	20	36.86	214.000	
200767	80	241	297	4.73	53	20	36.86	193.000	
210767	80	240	269	4.72	53	20	36.79	174.000	
220767	81	237	252	4.69	53	20	36.58	161.000	
230767	82	231	246	4.63	53	20	36.14	153.000	
240767	82	222	257	4.54	53	20	35.41	154.000	
250767	83	212	272	4.44	53	20	34.50	156.000	
260767	82	196	288	4.27	53	20	33.18	152.000	
270767	82	180	295	4.09	53	20	31.91	143.000	
280767	82	165	300	3.92	53	20	30.44	134.000	
290767	82	153	300	3.77	53	20	29.51	124.000	
300767	82	145	290	3.67	53	20	28.76	114.000	
310767	82	137	279	3.57	53	20	27.88	103.000	
10867	82	132	273	3.50	53	20	27.53	97.000	
20867	82	130	267	3.48	53	20	27.09	94.000	
30867	83	129	261	3.46	53	20	27.22	91.000	
40867	83	129	263	3.46	53	20	27.22	92.000	
50867	83	131	270	3.49	53	20	27.31	96.000	
60867	84	135	240	3.54	53	30	27.82	102.000	

SIMME SPORT									
DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
	F	CFS	PPM	F/S	F/S	F/S	FT	T/D	
		1000			10-7	10-3		1000	
70867	84	141	285	3.62	53	30	28.33	109.000	
80867	85	146	285	3.68	53	30	28.95	112.000	
90867	84	150	280	3.73	53	30	29.33	113.000	
100867	84	151	276	3.75	53	30	29.15	113.000	
110867	83	151	277	3.75	53	20	29.15	113.000	
120867	83	149	284	3.72	53	20	29.15	114.000	
130867	84	145	306	3.67	53	30	28.76	120.000	
140867	84	140	348	3.61	53	30	28.13	132.000	
150867	84	136	388	3.56	53	30	27.67	142.000	
160867	84	134	420	3.53	53	30	27.60	152.000	
170867	82	132	435	3.50	53	20	27.53	155.000	
180867	81	130	442	3.48	53	20	27.09	155.000	
190867	81	125	446	3.41	53	20	26.66	151.000	
200867	81	121	442	3.36	53	20	26.07	144.000	
210867	80	116	429	3.29	53	20	25.53	134.000	
220867	80	111	412	3.21	53	20	25.29	129.000	
230867	81	105	384	3.13	53	20	24.33	103.000	
240867	80	98	352	3.02	53	20	23.67	93.000	
250867	80	93	319	2.94	53	20	23.14	80.000	
260867	80	90	290	2.90	53	20	22.50	70.000	
270867	80	88	302	2.86	53	20	22.52	72.000	
280867	80	86	321	2.83	53	20	22.18	75.000	
290867	79	81	322	2.75	53	20	21.41	70.000	
300867	79	80	305	2.73	53	20	21.39	65.000	
310867	78	79	273	2.71	53	20	21.37	58.000	
10967	79	79	242	2.71	53	20	21.37	52.000	
20967	79	77	212	2.68	53	20	20.94	44.000	
30967	78	77	186	2.68	53	20	20.94	39.000	
40967	77	77	141	2.68	53	20	20.94	29.000	
50967	78	76	125	2.66	53	20	20.90	26.000	
60967	78	77	118	2.68	53	20	20.94	2	

SIMNESPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F		CFS	PPM	F/S	F/S	F/S	FT	T/D	
		1000			10-7	10-3		1000	
191167	59	132	197	3.50	53	20	27.53	70.000	
201167	59	126	188	3.42	53	20	26.90	64.000	
211167	58	122	182	3.37	53	20	26.31	60.000	
221167	58	119	174	3.33	53	19	25.93	55.910	
231167	59	116	169	3.29	53	20	25.53	53.000	
241167	59	113	165	3.24	53	20	25.47	50.000	
251167	60	113	161	3.20	53	20	25.02	48.000	
261167	58	105	160	3.13	53	20	24.33	45.000	
271167	57	100	150	3.05	53	20	23.92	43.000	
281167	55	96	157	2.99	53	20	23.39	41.000	
291167	55	95	159	2.98	53	20	23.08	41.000	
301167	55	95	161	2.98	53	20	23.08	41.000	
11267	55	95	162	2.98	53	20	23.08	42.000	
31267	55	96	165	2.99	53	20	23.39	43.000	
31267	54	96	170	2.99	53	20	23.39	44.000	
41267	54	95	176	2.98	53	20	23.08	45.000	
51267	54	98	195	3.02	53	20	23.67	54.000	
61267	55	103	225	3.10	53	20	24.10	63.000	
71267	56	110	266	3.20	53	20	25.02	79.000	
81267	56	118	326	3.31	53	20	26.04	104.000	
91267	56	128	381	3.45	53	20	27.00	132.000	
101267	55	142	446	3.63	53	20	28.53	171.000	
111267	54	156	509	3.81	53	20	29.68	214.000	
121267	53	168	581	3.95	53	20	30.90	264.000	
131267	50	177	660	4.06	53	20	31.50	315.000	
141267	50	185	758	4.15	53	20	32.21	379.000	
151267	48	201	830	4.32	53	20	33.74	450.000	
161267	49	213	845	4.45	53	20	34.60	486.000	
171267	48	223	858	4.55	53	20	35.49	517.000	
181267	47	238	853	4.70	53	20	36.65	588.000	
191267	48	249	835	4.81	53	20	37.37	561.000	
201267	48	255	790	4.86	53	20	38.08	544.000	
211267	48	262	746	4.93	53	20	38.45	528.000	
221267	46	269	708	4.99	53	20	39.14	514.000	
231267	48	273	673	5.03	53	20	39.32	496.000	
241267	48	273	646	5.03	53	20	39.32	476.000	
251267	45	273	617	5.03	53	20	39.32	455.000	
261267	45	274	591	5.04	53	20	39.36	437.000	
271267	45	276	570	5.06	53	20	39.44	425.000	
281267	44	281	545	5.10	53	20	39.99	413.000	
291267	44	287	524	5.16	53	20	40.19	406.000	
301267	43	291	466	5.19	53	20	40.67	366.000	
311267	43	295	416	5.23	53	20	40.78	331.000	
10168	44	99	371	4.83	53	20	21.06	107.000	
20168	44	309	338	4.73	53	20	36.82	282.000	
30168	42	310	313	4.74	53	20	36.85	245.000	
40168	42	310	293	4.74	53	20	36.85	230.000	
50168	42	310	275	4.75	53	20	36.89	221.000	
60168	42	311	263	4.75	53	20	36.89	221.000	
70168	42	309	259	4.73	53	20	36.82	216.000	
80168	41	306	254	4.71	53	20	36.64	212.000	
90168	40	305	272	4.71	53	10	36.53	224.000	
100168	39	310	316	4.74	53	10	36.85	264.000	
110168	38	309	334	4.73	53	10	36.82	279.000	
120168	38	305	339	4.71	53	10	36.53	279.000	
130168	38	302	338	4.68	53	10	36.42	276.000	
140168	36	299	326	4.66	53	10	36.23	263.000	
150168	35	297	308	4.65	53	10	36.08	247.000	
160168	36	295	292	4.64	53	10	35.93	233.000	
170168	36	294	277	4.63	53	10	35.89	220.000	
180168	36	292	256	4.61	53	10	35.82	202.000	
190168	36	290	244	4.60	53	10	35.66	191.000	
200168	36	288	221	4.59	53	10	35.51	172.000	
210168	36	286	199	4.57	53	10	35.43	154.000	
220168	37	284	174	4.56	53	10	35.28	133.000	
230168	38	283	162	4.55	53	10	35.23	124.000	
240168	38	280	152	4.53	53	10	35.04	115.000	
250168	38	276	144	4.50	53	10	34.80	107.000	
260168	40	271	140	4.46	53	10	34.51	102.000	
270168	40	261	146	4.39	53	10	33.84	103.000	
280168	40	251	156	4.31	53	10	33.22	106.000	
290168	40	239	182	4.22	53	10	32.40	117.000	
300168	41	234	202	4.18	53	20	32.06	128.000	
310168	42	230	230	4.14	53	20	31.85	143.000	
10268	42	229	270	4.14	53	20	31.72	167.000	
20268	43	233	362	4.17	53	20	32.01	228.000	
30268	44	245	473	4.26	53	20	32.85	313.000	
40268	44	259	575	4.37	53	20	33.75	402.000	
50268	44	272	677	4.47	53	20	34.55	497.000	
60268	43	282	725	4.54	53	20	35.19	552.000	
70268	44	288	742	4.59	53	20	35.51	577.000	
80268	43	293	719	4.62	53	20	35.85	569.000	
90268	43	298	658	4.66	53	20	36.12	529.000	
100268	44	303	596	4.69	53	20	36.45	488.000	
110268	44	308	531	4.73	53	20	36.71	442.000	
120268	44	313	482	4.76	53	20	37.03	407.000	
130268	42	318	437	4.79	53	20	37.35	375.000	
140268	42	322	412	4.82	53	20	37.56	358.000	
150268	42	325	386	4.84	53	20	37.74	339.000	
160268	41	327	361	4.86	53	20	37.80	319.000	
170268	41	327	344	4.86	53	20	37.80	304.000	
180268	41	326	329	4.85	53	20	37.77	290.000	
190268	41	323	315	4.83	53	20	37.60	275.000	
200268	41	317	313	4.79	53	20	37.25	268.000	
210268	40	310	298	4.74	53	10	36.85	249.000	
220268	40	302	285	4.68	53	10	36.42	232.000	
230268	40	292	273	4.61	53	10	35.82	215.000	
240268	39	280	259	4.53	53	10	35.04	196.000	
250268	39	266	243	4.42	53	10	34.21	175.000	
260268	39	251	233	4.31	53	10	33.22	158.000	
270268	39	237	220	4.20	53	10	32.30	141.000	
280268	39	227	218	4.12	53	10	31.61	129.000	
290268	39	215	200	4.02	53	10	30.78	116.000	
10368	40	205	190	3.93	53	10	30.10	5.000	

SIMNESPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F		CFS	PPM	F/S	F/S	F/S	FT	T/D	
		1000			10-7	10-3		1000	
20368	40	195	183	3.85	53	10	29.32	96.000	
30368	40	186	177	3.77	53	10	28.64	89.000	
40368	40	177	172	3.68	53	10	27.99	82.000	
50368	40	170	168	3.62	53	10	27.40	77.000	
60368	41	160	166	3.52	53	20	26.61	72.000	
70368	41	151	166	3.43	53	20	25.86	68.000	
80368	41	144	167	3.36	53	20	25.25	65.000	
90368	41	138	173	3.29	53	20	24.77	64.000	
100368	44	132	181	3.23	53	20	24.20	65.000	
110368	45	129	198	3.19	53	20	23.57	69.000	
120368	46	128	229	3.18	53	20	23.87	79.000	
130368	46	126	281	3.16	53	20	23.67	96.000	
140368	45	131	616	3.22	53	20	24.10	218.000	
150368	42	142	331	3.33	53	20	25.14	510.000	
160368	47	149	750	3.41	53	20	25.67	704.000	
170368	48	157	87	3.49	53	20	26.37	885.000	
180368	48	165	280	3.57	53	20	27.01	16.000	
190368	49	176	417	3.67	53	20	27.92	149.000	
200368	50	186	419	3.77	53	20	28.64	215.000	
210368	51	195	420	3.85	53	20	29.32	274.000	
220368	50	209	355	3.97	53	20	30.35	329.000	
230368	50	236	267	4.19	53	20	32.24	445.000	
240368	50	265	169	4.42	53	20	34.09	552.000	
250368	50	293	0	4.62	53	17	35.85	582.000	
260368	48	319	838	4.80	53	20	37.39	583.000	
270368	48	332	664	4.89	53	20	38.11	492.000	
280368	49	342	500	4.95	53	20	38.71	385.000	
290368	50	347	300	4.99	53	20	38.93	218.000	
300368	50	351	115	5.01	53	20	39.20	57.000	
310368	50	354	990	5.03	53	20	39.36	946.000	
10468	50	355	921	5.04	53	20	39.38	863.000	

SIMME SPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
	F	CFS	PPM	F/S	10-7	10-3	FT	T/D	1000
		1000							
140668	74	402	430	5.33	53	20	41.87	467.000	
150668	74	401	315	5.32	53	20	41.85	341.000	
160668	75	399	281	5.31	53	20	41.73	303.000	
170668	75	396	249	5.29	53	20	41.59	266.000	
180668	75	392	218	5.27	53	20	41.35	231.000	
190668	76	390	203	5.26	53	20	41.23	214.000	
200668	76	386	198	5.23	53	20	41.07	206.000	
210668	75	374	197	5.16	53	20	40.40	199.000	
220668	79	360	203	5.07	53	20	39.67	197.000	
230668	79	341	215	4.95	53	20	38.61	198.000	
240668	80	321	248	4.81	53	20	37.53	215.000	
250668	80	301	272	4.68	53	20	36.31	221.000	
260668	80	282	298	4.54	53	20	35.19	227.000	
270668	80	264	334	4.41	53	20	34.05	238.000	
280668	80	249	385	4.29	53	20	33.12	259.000	
290668	80	237	493	4.20	53	20	32.30	315.000	
300668	80	227	609	4.12	53	20	31.61	373.000	
10768	80	222	695	4.08	53	20	31.26	417.000	
20768	80	221	752	4.07	53	20	31.20	449.000	
30768	80	221	748	4.07	53	20	31.20	446.000	
40768	80	221	715	4.07	53	20	31.20	427.000	
50768	80	220	653	4.06	53	20	31.15	388.000	
60768	80	218	590	4.04	53	20	31.03	347.000	
70768	80	214	468	4.01	53	20	30.72	282.000	
80768	80	210	379	3.98	53	20	30.41	215.000	
90768	80	204	317	3.93	53	20	29.97	175.000	
100768	80	199	282	3.88	53	20	29.65	152.000	
110768	80	196	258	3.86	53	20	29.38	137.000	
120768	81	193	244	3.83	53	20	29.19	127.000	
130768	81	191	233	3.81	53	20	29.05	120.000	
140768	81	188	226	3.78	53	20	28.85	115.000	
150768	81	186	222	3.77	53	20	28.64	111.000	
160768	81	182	219	3.73	53	20	28.36	108.000	
170768	81	180	219	3.71	53	20	28.21	106.000	
180768	81	178	220	3.69	53	20	28.07	106.000	
190768	82	176	224	3.67	53	20	27.92	106.000	
200768	82	175	227	3.66	53	20	27.85	107.000	
210768	83	173	233	3.64	53	20	27.70	109.000	
220768	83	170	235	3.62	53	20	27.40	108.000	
230768	83	167	233	3.59	53	20	27.17	105.000	
240768	83	162	229	3.54	53	20	26.77	100.000	
250768	83	157	224	3.49	53	20	26.37	95.000	
260768	83	152	215	3.44	53	20	25.95	88.000	
270768	83	148	208	3.40	53	20	25.60	83.000	
280768	84	143	201	3.35	53	20	25.16	78.000	
290768	85	138	198	3.29	53	30	24.77	74.000	
300768	85	133	199	3.24	53	30	24.29	71.000	
310768	85	127	203	3.17	53	30	23.77	70.000	
10868	85	123	206	3.13	53	30	23.36	68.000	
20868	85	120	211	3.09	53	30	23.12	68.000	
30868	86	120	211	3.09	53	30	23.12	68.000	
40868	85	121	210	3.10	53	30	23.22	69.000	
50868	85	123	207	3.13	53	30	23.36	69.000	
60868	85	126	205	3.16	53	30	23.67	70.000	
70868	86	127	199	3.17	53	30	23.77	68.000	
80868	86	128	191	3.18	53	30	23.87	66.000	
90868	86	127	185	3.17	53	30	23.77	63.000	
100868	86	125	184	3.15	53	30	23.57	62.000	
110868	86	124	183	3.14	53	30	23.46	61.000	
120868	85	125	185	3.15	53	30	23.57	62.000	
130868	86	130	192	3.20	53	30	24.07	67.000	
140868	86	136	202	3.27	53	30	24.58	74.000	
150868	86	140	222	3.31	53	30	24.95	84.000	
160868	85	141	246	3.32	53	30	25.05	94.000	
170868	85	143	279	3.35	53	30	25.16	108.000	
180868	84	143	282	3.35	53	30	25.16	109.000	
190868	84	142	283	3.33	53	30	25.14	109.000	
200868	84	141	273	3.32	53	30	25.05	104.000	
210868	85	140	204	3.31	53	30	24.95	93.000	
220868	85	141	249	3.32	53	30	25.05	95.000	
230868	85	141	242	3.32	53	30	25.05	93.000	
240868	85	141	238	3.32	53	30	25.05	91.000	
250868	85	140	242	3.31	53	30	24.95	91.000	
260868	85	137	247	3.28	53	30	24.67	91.000	
270868	85	132	262	3.23	53	30	24.20	93.000	
280868	85	126	282	3.16	53	30	23.67	96.000	
290868	85	120	288	3.09	53	30	23.12	93.000	
310868	84	110	272	2.97	53	30	22.16	81.000	
10968	84	106	260	2.92	53	30	21.76	74.000	
20968	84	102	246	2.87	53	30	21.35	68.000	
30968	84	99	224	2.83	53	30	21.06	60.000	
40968	82	95	205	2.78	53	20	20.62	53.000	
50968	81	91	189	2.73	53	20	20.16	46.000	
60968	81	88	76	2.69	53	20	19.83	42.000	
70968	81	88	165	2.69	53	20	19.83	40.000	
80968	81	88	157	2.69	53	20	19.83	37.000	
90968	81	86	147	2.66	53	20	19.62	34.000	
100968	81	83	140	2.62	53	20	19.26	31.000	
110968	80	79	134	2.56	53	20	18.82	29.000	
120968	79	74	129	2.49	53	20	18.19	26.000	
130968	79	70	127	2.42	53	20	17.76	24.000	
140968	79	66	119	2.36	53	20	17.23	21.000	
150968	79	65	112	2.35	53	20	17.06	20.000	
160968	79	65	110	2.35	53	20	17.06	19.000	
170968	79	67	114	2.38	53	20	17.33	21.000	
180968	79	77	118	2.53	53	20	18.59	25.000	
190968	78	88	125	2.69	53	20	19.83	30.000	
200968	78	96	129	2.80	53	20	20.62	33.000	
210968	78	98	131	2.82	53	20	20.93	35.000	
220968	78	99	132	2.83	53	20	21.06	35.000	
230968	78	99	132	2.83	53	20	21.06	35.000	
240968	78	98	132	2.82	53	20	20.93	35.000	
250968	78	96	132	2.80	53	20	20.68	34.000	
260968	78	94	130	2.77	53	20	20.49	33.000	

SIMME SPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
	F	CFS	PPM	F/S	10-7	10-3	FT	T/D	1000
		1000							
270968	75	91	126	2.73	53	20	20.16	31.000	
280968	76	90	122	2.72	53	20	20.03	30.000	
290968	77	88	120	2.69	53	20	19.83	29.000	
300968	77	99	117	2.83	53	20	21.06	27.000	
11068	77	83	102	2.62	53	24	19.26	22.860	
21068	77	84	104	2.63	53	24	19.41	23.540	
31068	77	85	106	2.65	53	24	19.48	24.330	
41068	77	87	109	2.67	53	24	19.76	25.600	
51068	77	88	113	2.69	53	24	19.83	26.850	
61068	76	89	114	2.70	53	24	19.96	27.390	
71068	76	88	115	2.69	53	24	19.83	27.320	
81068	76	87	116	2.67	53	24	19.76	27.250	
91068	74	86	118	2.66	53	23	19.62	27.400	
101068	73	85	120	2.65	53	23	19.48	27.540	
111068	72	83	120	2.62	53	23	19.26	26.890	
121068	72	83	120	2.62	53	23	19.26	26.890	
131068	72	82	121	2.60	53	23	19.19	26.790	
141068	72	82	121	2.60	53	23	19.19	26.790	
151068	71	82	122	2.62	53	22	19.19	26.010	
161068	72	82	123	2.60	53	23	19.19	27.230	
171068	72	83	126	2.62	53	23	19.26	28.240	
181068	72	82	128	2.60	53	23	19.19	28.340	
191068	72	82	130	2.60	53	23	19.19	28.780	
201068	71	82	129	2.60	53	22	19.19	28.560	
211068	70	81	126	2.59	53	22	19.04	27.560	
221068	70	82	121	2.60	53	22	19.19	26.790	
231068	70	84	117	2.63	53	22	19.41	26.540	
241068	69	87	116	2.67	53	22	19.76	27.260	
251068	69	89	119	2.70	53	22	19.96	28.600	
261068	68	90	123	2.72	53	22	20.03	29.890	
271068	68	92	131	2.74	53	22	20.30	32.540	
281068	68	93	139	2.76	53	22	20.36	34.900	
291068	6								

SIMMS SPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D	
		1000			10-7	10-3		1000	
90169	41	264	329	4.30	53	15	72.44	234.510	
100169	39	261	318	4.28	53	14	72.47	224.390	
110169	39	258	307	4.25	53	14	72.95	213.860	
120169	39	252	300	4.20	53	14	73.45	204.120	
130169	39	246	293	4.16	53	14	73.47	194.610	
140169	39	238	279	4.09	53	14	74.25	179.290	
150169	39	228	268	4.01	53	14	74.82	164.980	
160169	39	219	258	3.93	53	14	75.69	152.560	
170169	39	210	252	3.85	53	14	76.51	142.840	
180169	39	200	243	3.76	53	14	77.42	131.220	
190169	41	190	240	3.67	53	15	78.26	123.120	
200169	39	180	235	3.58	53	14	79.01	114.210	
210169	39	172	234	3.50	53	14	80.01	108.670	
220169	41	166	234	3.44	53	15	80.72	104.880	
230169	43	163	239	3.41	53	15	81.06	105.190	
240169	45	165	239	3.43	53	16	80.84	106.470	
250169	45	174	250	3.52	53	15	79.77	117.450	
260169	43	189	267	3.66	53	15	78.40	136.250	
270169	43	206	287	3.82	53	15	76.56	159.630	
280169	43	221	311	3.95	53	15	75.39	185.570	
290169	43	234	339	4.06	53	15	74.39	214.180	
300169	43	244	378	4.14	53	15	73.79	249.030	
310169	43	252	428	4.20	53	15	73.45	291.210	
10269	43	260	489	4.27	53	15	72.63	343.280	
20269	43	277	572	4.40	53	15	71.65	427.830	
30269	43	303	678	4.59	53	15	70.33	554.670	
40269	43	326	811	4.76	53	15	68.92	713.840	
50269	43	344	916	4.88	53	15	68.24	850.780	
60269	43	357	939	4.97	53	15	67.57	965.100	
70269	43	368	921	5.04	53	15	67.20	915.110	
80269	43	376	878	5.10	53	15	66.60	911.650	
90269	43	383	867	5.14	53	15	66.50	896.560	
100269	43	390	828	5.19	53	15	66.05	871.480	
110269	45	396	792	5.22	53	16	66.09	946.810	
120269	45	403	770	5.27	53	16	65.63	837.840	
130269	46	407	737	5.29	53	16	65.64	809.870	
140269	45	415	730	5.34	53	16	65.34	817.940	
150269	45	420	718	5.37	53	16	65.18	814.210	
160269	45	425	707	5.41	53	16	64.71	811.240	
170269	45	429	670	5.43	53	16	64.71	799.230	
180269	45	432	672	5.45	53	16	64.55	783.820	
190269	43	436	661	5.47	53	15	64.54	778.130	
200269	43	437	634	5.48	53	15	64.38	748.060	
210269	43	439	614	5.49	53	15	64.38	727.770	
220269	43	443	595	5.51	53	15	64.36	711.640	
230269	43	443	546	5.51	53	15	64.36	700.910	
240269	43	440	887	5.50	53	15	64.22	533.760	
250269	44	436	591	5.47	53	16	64.54	655.730	
260269	43	640	640	6.58	53	15	58.98	739.580	
270269	43	420	692	5.37	53	15	65.18	784.710	
280269	45	415	844	5.34	53	16	65.34	945.770	
10369	45	408	68	5.30	53	16	65.49	176.510	
23369	45	399	155	5.24	53	16	65.94	244.280	
30369	45	389	270	5.18	53	16	66.21	333.880	
40369	45	375	360	5.09	53	16	66.76	377.000	
50369	46	365	455	5.02	53	16	67.34	433.900	
60369	47	355	506	4.96	53	16	67.54	443.500	
70369	46	346	415	4.90	53	16	67.91	321.890	
82369	46	337	270	4.84	53	16	68.27	155.570	
90369	46	329	98	4.78	53	16	68.82	975.350	
100369	46	322	955	4.73	53	16	69.19	830.280	
110369	46	318	835	4.70	53	16	69.46	716.930	
120369	45	308	755	4.63	53	16	69.91	627.860	
130369	45	298	692	4.56	53	16	70.34	556.780	
140369	47	289	645	4.49	53	16	70.98	503.290	
150369	45	284	645	4.45	53	16	71.37	494.500	
160369	45	281	655	4.43	53	16	71.43	496.950	
170369	45	280	670	4.42	53	16	71.59	508.790	
180369	45	281	702	4.43	53	16	71.43	532.610	
190369	46	278	738	4.41	53	16	71.49	553.940	
200369	46	271	778	4.35	53	16	72.19	569.260	
210369	46	265	822	4.31	53	16	72.28	588.140	
220369	46	257	855	4.24	53	16	73.11	600.220	
230369	46	250	900	4.20	53	16	73.45	612.360	
240369	46	250	943	4.19	53	16	73.31	636.520	
250369	48	244	11	4.14	53	17	73.79	666.050	
260369	50	237	20	4.08	53	17	74.41	652.700	
270369	50	233	51	4.05	53	17	74.55	661.180	
280369	55	237	72	4.08	53	18	74.41	685.970	
290369	55	242	91	4.12	53	18	74.10	712.860	
300369	55	266	107	4.32	53	18	72.12	741.250	
310369	55	266	110	4.32	53	18	72.12	797.200	
10469	55	284	100	4.45	53	18	71.37	843.400	
20469	55	300	75	4.57	53	18	70.42	870.750	
30469	54	313	56	4.67	53	18	69.49	892.430	
40469	54	323	31	4.74	53	18	69.03	899.140	
50469	54	333	990	4.81	53	18	68.54	890.110	
60469	54	339	949	4.85	53	18	68.31	868.620	
70469	55	345	917	4.89	53	18	68.07	854.190	
80469	55	350	893	4.92	53	18	67.99	834.430	
90469	55	345	850	4.89	53	18	68.07	791.770	
100469	55	340	810	4.86	53	18	68.15	743.580	
110469	55	335	787	4.82	53	18	68.59	711.840	
120469	55	329	747	4.78	53	18	68.02	663.560	
130469	57	329	724	4.78	53	19	68.02	643.130	
140469	57	331	677	4.79	53	19	68.87	605.030	
150469	55	334	649	4.81	53	18	68.75	585.270	
160469	55	339	627	4.85	53	18	68.31	573.890	
170469	58	344	609	4.88	53	19	68.24	565.640	
180469	57	352	568	4.94	53	19	67.06	539.830	
190469	59	361	541	5.00	53	19	67.28	527.310	
200469	59	369	505	5.05	53	19	67.04	493.130	
210469	61	376	476	5.10	53	20	66.60	483.240	
220469	61	381	445	5.13	53	20	66.48	457.770	

SIMMS SPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	
F	F	CFS	PPM	F/S	F/S	F/S	FT	T/D	
		1000			10-7	10-3		1000	
230469	63	387	422	5.17	53	20	66.20	440.950	
240469	63	394	415	5.21	53	20	66.08	441.480	
250469	63	393	410	5.21	53	20	65.91	435.050	
260469	63	394	409	5.21	53	20	66.08	435.030	
270469	64	393	408	5.21	53	21	65.91	432.970	
280469	64	393	411	5.21	53	21	65.91	436.110	
290469	64	394	399	5.21	53	21	66.08	413.820	
300469	64	394	377	5.21	53	21	66.08	401.050	
10569	64	394	368	5.21	53	21	66.08	391.480	
20569	64	394	362	5.21	53	21	66.08	385.100	
30569	64	395	356	5.22	53	21	65.92	379.670	
40569	64	396	360	5.22	53	21	66.09	384.910	
50569	64	824	279	7.43	53	21	55.61	620.720	
60569	64	398	380	5.24	53	21	65.77	408.350	
70569	64	403	520	5.27	53	21	65.63	565.810	
80569	64	407	562	5.29	53	21	65.64	617.580	
90569	66	408	605	5.30	53	21	65.49	666.470	
100569	66	407	628	5.29	53	21	65.64	690.110	
110569	66	407	639	5.29	53	21	65.41	702.200	
120569	66	404	644	5.28	53	21	65.47	702.480	
130569	67	400	630	5.25	53	21	65.78	680.400	
140569	68	394	621	5.21	53	22	66.08	660.620	
150569	68	387	613	5.17	53	22	66.20	640.520	
160569	70	379	604	5.12	53	22	66.46	618.070	
170569	70	372	590	5.07	53	22	66.90	592.600	
180569	70	364	589	5.02	53	22	67.15	578.870	
190569	70	357	580	4.97	53	22	67.57	559.060	
200569	70	351	580	4.93	53	22	67.83	549.670	
210569	70	348	584	4.91	53	22	67.95	548.730	
220569	72	345	589	4.89	53	23	68.07	548.650	
230569	72	341	594	4.86</					

SIMMSPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSFD	
	F	CFS	PPH	F/S	10-7	10-3	FT	Y/D	
		1000						1000	
53869	82	223	275	3.96	53	25	75.59	165.580	
60869	82	213	268	3.88	53	25	76.07	154.130	
70869	82	203	263	3.79	53	25	76.99	144.150	
80869	82	194	259	3.71	53	25	77.72	135.660	
90869	84	184	253	3.61	53	26	79.07	125.690	
103869	84	175	218	3.53	53	26	79.64	117.180	
110869	84	166	244	3.44	53	24	80.72	109.360	
122869	84	158	241	3.36	53	26	81.61	102.810	
132869	84	149	239	3.27	53	26	82.51	96.150	
150369	82	228	268	4.01	53	25	74.82	164.980	
143869	82	238	279	4.09	53	25	74.25	179.290	
163869	82	219	258	3.93	53	26	75.69	152.560	
173869	84	210	252	3.85	53	26	76.51	142.880	
182869	84	200	243	3.76	53	25	77.42	131.220	
192869	82	190	240	3.67	53	25	78.26	123.120	
202869	82	180	235	3.58	53	25	79.01	114.210	
212869	82	172	234	3.50	53	25	80.01	108.670	
222869	82	166	234	3.44	53	25	80.72	104.880	
232869	84	163	239	3.41	53	26	81.06	105.180	
242869	84	165	239	3.43	53	26	80.84	106.470	
252869	84	174	250	3.52	53	26	79.77	117.450	
262869	82	189	267	3.66	53	25	78.40	136.250	
272869	82	206	289	3.82	53	25	76.56	159.630	
282869	82	221	311	3.95	53	25	75.39	185.570	
292869	82	234	339	4.06	53	25	74.39	214.180	
302869	82	244	378	4.14	53	25	73.79	249.300	
13959	81	123	165	2.98	53	25	86.43	54.800	
23969	81	123	160	2.98	53	25	86.43	53.140	
33969	81	123	158	2.98	53	25	86.43	51.190	
42969	81	113	156	2.86	53	25	88.23	47.600	
52969	81	104	156	2.75	53	25	89.79	43.800	
62969	81	99	153	2.68	53	25	91.33	40.900	
72969	81	93	149	2.60	53	25	92.73	37.410	
82969	81	89	147	2.55	53	25	93.26	35.320	
92969	81	86	142	2.51	53	25	93.84	32.970	
102969	82	85	136	2.49	53	25	94.69	31.210	
112969	82	86	133	2.51	53	25	93.84	30.880	
122969	82	88	128	2.54	53	25	93.14	30.410	
132969	84	88	123	2.54	53	26	93.14	29.220	
142969	84	88	118	2.54	53	26	93.14	27.560	
152969	82	88	112	2.54	53	25	93.14	26.610	
162969	81	80	106	2.55	53	25	93.26	25.470	
172969	79	90	101	2.56	53	25	93.38	24.540	
182969	79	91	100	2.58	53	25	92.53	24.570	
192969	79	92	99	2.59	53	25	92.64	24.590	
202969	79	92	96	2.59	53	25	92.64	23.850	
212969	81	91	94	2.58	53	25	92.53	23.100	
222969	81	89	93	2.55	53	25	93.26	22.350	
232969	79	87	93	2.52	53	25	93.58	21.850	
242969	79	85	94	2.49	53	25	94.69	21.570	
252969	77	84	96	2.48	53	24	94.54	21.770	
262969	75	85	99	2.49	53	24	94.69	22.720	
270969	75	88	103	2.54	53	24	93.14	24.470	
280969	75	92	108	2.59	53	24	92.64	26.830	
290969	73	95	116	2.63	53	23	91.97	29.750	
300969	73	97	125	2.66	53	23	91.21	32.740	
11069	73	97	185	2.66	53	23	91.21	48.450	
21069	75	95	167	2.63	53	24	91.97	47.970	
31069	75	90	190	2.56	53	24	93.38	46.170	
41069	75	86	187	2.51	53	24	93.84	43.420	
51069	73	84	180	2.48	53	23	94.54	40.820	
61069	73	85	175	2.49	53	23	94.69	40.160	
71069	73	82	175	2.49	53	23	94.69	43.470	
81069	73	81	174	2.48	53	23	92.53	43.240	
91069	75	89	178	2.55	53	24	91.26	42.770	
101069	75	88	182	2.54	53	24	93.14	43.240	
111069	75	89	182	2.55	53	24	93.26	43.730	
121069	75	89	178	2.55	53	24	93.26	42.770	
131069	75	88	174	2.54	53	24	93.14	41.340	
141069	70	85	171	2.47	53	22	94.69	39.240	
151069	70	80	167	2.42	53	22	95.88	36.070	
161069	75	79	163	2.41	53	24	95.68	34.770	
171069	70	77	157	2.38	53	22	96.30	32.640	
181069	70	79	161	2.41	53	22	95.68	34.340	
191069	70	83	165	2.47	53	22	94.37	36.980	
201069	70	92	171	2.59	53	22	92.64	42.480	
211069	70	107	183	2.79	53	22	89.02	52.870	
221069	66	128	199	3.04	53	21	85.45	68.770	
231069	66	149	216	3.27	53	21	82.51	86.900	
241069	66	135	235	3.11	53	21	85.03	104.690	
251069	64	177	255	3.55	53	21	79.39	121.680	
261069	63	184	279	3.61	53	20	79.07	138.610	
271069	63	186	291	3.63	53	20	78.80	146.140	
281069	61	182	296	3.60	53	20	78.76	145.450	
291069	61	173	291	3.51	53	20	79.89	135.930	
301069	61	164	276	3.42	53	20	80.95	122.210	
211069	61	156	274	3.34	53	20	81.82	115.410	
11169	59	150	267	3.20	53	19	82.41	108.130	
21169	59	144	262	3.21	53	19	83.63	101.870	
31169	59	138	259	3.15	53	19	84.11	96.500	
41169	57	132	252	3.08	53	19	85.23	89.810	
51169	57	127	246	3.02	53	19	86.25	84.350	
61169	57	121	234	2.95	53	19	87.27	76.450	
71169	59	117	222	2.91	53	19	87.38	70.130	
81169	59	113	207	2.86	53	19	88.23	63.160	
91169	57	109	191	2.81	53	19	89.05	56.210	
101169	57	107	175	2.79	53	19	89.02	50.560	
111169	59	107	164	2.79	53	19	89.02	47.380	
121169	59	104	153	2.80	53	19	89.03	44.610	
131169	59	113	142	2.86	53	19	88.23	43.320	
141169	57	115	136	2.88	53	19	88.21	42.230	
151169	55	111	128	2.83	53	18	89.06	38.360	
161169	57	108	126	2.80	53	19	89.03	36.740	
171169	57	104	122	2.75	53	19	89.79	34.260	

SIMMSPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSFD	
	F	CFS	PPH	F/S	10-7	10-3	FT	Y/D	
		1000						1000	
181169	55	99	120	2.68	53	18	91.33	32.080	
191169	55	97	115	2.66	53	18	91.21	30.120	
201169	54	96	113	2.64	53	18	92.05	29.290	
211169	54	99	111	2.68	53	18	91.33	29.670	
221169	54	107	112	2.75	53	18	89.02	32.360	
231169	54	116	114	2.90	53	18	87.40	35.700	
241169	54	123	116	2.98	53	18	86.43	38.520	
251169	54	127	126	3.02	53	18	86.25	43.210	
261169	54	131	152	3.07	53	18	85.29	53.750	
271169	52	134	166	3.10	53	18	85.10	60.260	
281169	50	137	175	3.14	53	17	84.18	64.730	
291169	48	139	182	3.16	53	17	84.03	68.300	
301169	52	139	186	3.16	53	18	84.03	69.810	
11269	55	137	187	3.14	53	18	84.18	64.170	
21269	54	136	186	3.13	53	18	84.25	63.300	
31269	54	135	183	3.11	53	18	85.03	66.700	
41269	54	133	180	3.09	53	19	85.17	64.640	
51269	50	130	179	3.06	53	17	85.35	62.830	
61269	48	130	178	3.06	53	17	85.35	62.490	
71269	50	135	176	3.11	53	17	85.03	64.150	
81269	48	135	175	3.11	53	17	85.03	63.790	
91269	46	135	173	3.11	53	16	85.03	63.660	
101269	46	134	171	3.10	53	16	85.10	61.870	
111269	46	132	170	3.08	53	16	85.23	60.590	
121269	46	131	165	3.07	53	16	85.29	58.360	
131269	46	129	163	3.05	53	16	85.40	56.770	
141269	45	128	158	3.04	53	16	85.45	54.600	
151269	45	127	155	3.02	53	16	86.25	53.150	
161269	46	126	151	3.01	53	16	86.30	51.370	
171269	46	125	148	3.00	53	16	86.35	49.950	
181269	46	124	145	2.99	53	16	86.39	48.550	
191269	46	123	143	2.98	53	16	86.43	47.490	
201269	46	121							

SIMME SPORT									
DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TS	TSD
	F	CFS	PPM	F/S	10-7	10-3	FT	T/D	1000
20370	43	258	770	4.16	53	15	46.00	536,380	
40370	46	268	870	4.24	53	16	46.79	629,530	
30370	45	262	825	4.19	53	16	46.34	583,600	
50370	46	272	892	4.27	53	16	47.12	655,080	
60370	46	273	905	4.28	53	16	47.18	667,080	
70370	46	275	885	4.29	53	16	47.40	657,110	
80370	46	275	864	4.29	53	16	47.40	641,520	
90370	46	275	832	4.29	53	16	47.40	617,760	
100370	46	275	765	4.29	53	16	47.40	568,010	
110370	46	274	715	4.28	53	16	47.35	528,960	
120370	50	274	670	4.28	53	17	47.35	495,670	
130370	50	275	615	4.29	53	17	47.40	456,640	
140370	46	278	560	4.31	53	16	47.67	420,340	
150370	46	281	523	4.34	53	16	47.82	396,800	
160370	46	285	498	4.37	53	16	48.14	383,210	
170370	48	288	475	4.39	53	17	48.40	369,360	
180370	48	291	462	4.41	53	17	48.66	362,990	
190370	48	294	450	4.43	53	17	48.91	357,210	
200370	48	296	440	4.45	53	17	49.01	351,650	
210370	50	298	440	4.46	53	17	49.21	354,020	
220370	46	300	445	4.47	53	16	49.42	360,450	
230370	46	304	450	4.50	53	16	49.71	369,360	
240370	46	304	455	4.50	53	16	49.71	373,460	
250370	46	302	460	4.49	53	16	49.51	375,080	
260370	48	300	465	4.47	53	17	49.42	376,650	
270370	48	297	470	4.45	53	17	49.17	376,890	
280370	48	296	470	4.45	53	17	49.01	375,620	
290370	48	294	467	4.43	53	17	48.91	370,700	
300370	48	292	460	4.42	53	17	48.70	370,550	
310370	50	291	470	4.41	53	17	48.66	369,280	
10470	54	291	465	4.41	53	18	48.66	365,350	
20470	54	289	460	4.40	53	18	48.44	358,940	
30470	52	288	454	4.39	53	18	48.40	353,030	
40470	52	288	438	4.39	53	18	48.40	340,590	
50470	52	288	426	4.39	53	18	48.40	331,260	
60470	52	288	414	4.39	53	18	48.40	321,930	
70470	52	288	400	4.39	53	18	48.40	311,040	
80470	54	288	385	4.39	53	18	48.40	299,380	
90470	55	291	370	4.41	53	18	48.66	290,710	
100470	57	297	347	4.45	53	19	49.17	278,260	
110470	55	304	325	4.50	53	18	49.71	266,760	
120470	55	311	317	4.55	53	18	50.24	266,180	
130470	55	318	313	4.60	53	18	50.76	268,740	
140470	55	324	312	4.64	53	18	51.23	272,940	
150470	55	328	312	4.67	53	18	51.50	276,310	
160470	55	332	314	4.70	53	18	51.76	281,470	
170470	58	336	319	4.72	53	18	52.14	289,400	
180470	57	339	325	4.74	53	19	52.36	297,470	
190470	57	342	330	4.76	53	19	52.58	312,110	
200470	59	344	358	4.78	53	19	52.64	325,080	
210470	63	344	364	4.78	53	20	52.64	338,080	
220470	63	343	384	4.77	53	20	52.61	355,620	
230470	64	343	411	4.77	53	21	52.61	380,630	
240470	64	343	453	4.77	53	21	52.61	419,520	
250470	63	344	512	4.78	53	20	52.64	475,550	
260470	64	343	560	4.77	53	21	52.61	518,620	
270470	64	344	635	4.78	53	21	52.64	589,790	
280470	64	346	695	4.79	53	21	52.83	649,270	
290470	66	353	755	4.84	53	21	53.28	719,590	
300470	66	366	810	4.92	53	21	54.26	800,440	
10570	64	379	845	5.00	53	21	55.20	874,670	
20570	64	391	877	5.02	53	21	55.96	925,550	
30570	63	400	890	5.13	53	20	56.63	961,220	
40570	64	406	902	5.17	53	21	56.99	988,770	
50570	64	410	918	5.20	53	21	57.19	10,230	
60570	64	416	907	5.23	53	21	57.66	13,740	
70570	66	420	880	5.26	53	21	57.85	957,920	
80570	66	424	877	5.28	53	21	58.16	958,200	
90570	66	426	770	5.29	53	21	58.31	885,650	
100570	68	429	665	5.31	53	22	58.48	776,270	
110570	68	434	560	5.34	53	22	58.85	656,210	
120570	70	437	484	5.36	53	22	58.96	571,070	
130570	70	440	453	5.37	53	22	59.24	538,160	
140570	72	442	421	5.39	53	23	59.27	502,420	
150570	72	445	390	5.40	53	23	59.55	468,580	
160570	70	447	368	5.41	53	22	59.69	444,140	
170570	68	449	347	5.43	53	22	59.72	420,670	
180570	70	450	333	5.43	53	22	59.85	409,240	
190570	70	450	336	5.43	53	22	59.85	404,590	
200570	72	450	327	5.43	53	23	59.85	397,130	
210570	72	448	330	5.42	53	23	59.71	384,170	
220570	73	445	335	5.40	53	23	59.55	402,500	
230570	73	442	355	5.39	53	23	59.27	423,660	
240570	75	438	365	5.36	53	24	59.09	431,650	
250570	73	433	370	5.33	53	23	58.78	437,570	
260570	73	427	367	5.30	53	23	58.33	423,110	
270570	73	422	365	5.27	53	23	58.01	415,880	
280570	73	416	352	5.23	53	23	57.66	395,370	
290570	75	410	339	5.20	53	24	57.19	375,270	
300570	75	403	316	5.15	53	24	56.81	343,940	
10670	73	386	282	5.05	53	23	56.29	311,470	
20670	73	376	270	4.98	53	23	55.61	303,900	
30670	72	363	275	4.90	53	23	54.05	274,100	
40670	73	346	282	4.79	53	23	52.83	263,440	
50670	73	330	294	4.68	53	23	51.69	261,950	
60670	73	316	316	4.59	53	23	50.56	269,610	
70670	73	304	338	4.50	53	23	49.71	277,430	
80670	75	293	350	4.42	53	24	48.87	276,880	
90670	73	283	362	4.35	53	23	48.04	276,600	
100670	75	278	374	4.31	53	24	47.67	280,720	
110670	75	276	374	4.30	53	24	47.45	278,760	
120670	77	277	375	4.31	53	24	47.50	282,460	
130670	77	279	375	4.32	53	24	47.72	282,490	

SIMME SPORT									
DATE	TH	DIS	SED	VEL	SLP	SVEL	DEP	TS	TSD
	F	CFS	PPM	F/S	10-7	10-3	FT	T/D	1000
140670	77	281	376	4.34	53	24	47.82	285,270	
150670	77	281	374	4.34	53	24	47.82	283,780	
160670	79	281	368	4.34	53	25	47.82	379,800	
170670	79	279	362	4.32	53	25	47.72	272,690	
180670	79	275	356	4.29	53	25	47.40	264,330	
190670	79	269	350	4.25	53	25	46.85	254,200	
200670	79	262	345	4.19	53	25	46.34	244,050	
210670	79	259	341	4.17	53	25	46.06	238,460	
220670	79	257	338	4.16	53	25	45.82	234,540	
230670	79	257	336	4.16	53	25	45.82	233,150	
240670	79	257	334	4.16	53	25	45.82	231,760	
250670	81	258	333	4.16	53	25	46.00	231,970	
260670	81	256	331	4.15	53	25	45.76	228,790	
270670	81	254	330	4.13	53	25	45.65	226,310	
280670	81	251	328	4.11	53	25	45.35	222,290	
290670	81	248	327	4.08	53	25	45.17	218,960	
300670	81	244	324	4.05	53	25	44.80	213,450	
10770	81	239	322	4.01	53	25	44.37	207,790	
20770	81	235	322	3.98	53	25	43.99	204,310	
30770	81	228	321	3.92	53	25	43.40	197,610	
40770	82	219	317	3.85	53	25	42.52	187,440	
50770	81	209	312	3.76	53	25	41.64	175,220	
60770	82	197	308	3.66	53	25	40.44	163,830	
70770	82	184	304	3.54	53	25	39.18	151,030	
80770	82	172	300	3.43	53	25	37.92	139,320	
90770	82	161	294	3.32	53	25	36.79	127,800	
100770	82	152	285	3.23	53	25	35.80	116,960	
110770	82	145	278	3.16	53	25	34.98	108,840	
120770	82	136	272	3.06	53	25	33.99	101,350	
130770	82	132	262	3.02	53	25	33.47	93,380	
140770	82	121	252	2.90	53	25	32.08	86,410	
150770	82	123	242	2.92	53	25	32.37	80,370	
160770	82	119	222	2.87	53	25	31.91	71,330	



SIMMSPORT								SIMMSPORT									
DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED	DATE	TM	DIS	SED	VEL	SLP	SVEL	DEP	TSED
F	CFS	PPH	F/S	F/S	F/S	FT	T/D	1000	F	CFS	PPH	F/S	F/S	F/S	FT	T/D	1000
								10-7 10-3									
260970	79	101	155	2.66	53	25	29.45	42.270	90171	40	242	386	3.68	53	14	64.32	252.210
270970	79	109	164	2.76	53	25	30.52	48.270	100171	40	238	385	3.85	53	14	63.49	247.400
280970	79	118	179	2.86	53	25	31.77	57.630	110171	41	235	382	3.83	53	15	60.62	242.360
290970	79	126	187	2.95	53	25	32.78	63.620	120171	41	232	376	3.81	53	15	57.72	235.530
300970	75	132	194	3.02	53	24	33.47	69.140	130171	41	230	364	3.79	53	15	61.12	226.040
11070	82	140	261	3.11	53	25	34.37	98.660	140171	41	229	362	3.78	53	15	62.89	223.820
21070	82	149	302	3.20	53	25	35.45	121.440	150171	42	230	359	3.79	53	15	61.12	222.940
31070	82	160	342	3.31	53	25	36.68	147.740	160171	41	230	351	3.79	53	15	61.12	217.970
41070	82	172	396	3.43	53	25	37.92	183.700	170171	42	230	343	3.79	53	15	61.12	213.000
51070	82	183	433	3.53	53	25	39.09	213.950	180171	44	231	333	3.80	53	16	59.40	207.690
61070	81	192	468	3.61	53	25	40.01	242.610	190171	41	235	333	3.83	53	15	60.62	211.290
71070	75	197	487	3.66	53	24	40.44	259.040	200171	41	238	331	3.85	53	15	63.49	212.700
81070	75	197	463	3.66	53	24	40.44	246.270	210171	41	239	333	3.86	53	15	61.61	214.890
91070	73	193	469	3.62	53	23	40.10	244.470	220171	41	238	331	3.85	53	15	63.49	212.700
101070	73	183	446	3.53	53	23	39.09	220.370	230171	41	231	333	3.80	53	15	59.40	207.690
111070	73	174	435	3.45	53	23	38.11	204.360	240171	42	226	335	3.76	53	15	59.59	204.420
121070	73	173	438	3.44	53	23	38.02	204.590	250171	42	224	343	3.75	53	15	54.80	207.450
131070	72	174	446	3.45	53	23	38.11	209.530	260171	42	225	353	3.75	53	15	61.26	214.450
141070	72	171	446	3.42	53	23	37.82	205.920	270171	41	225	358	3.75	53	15	61.26	217.480
151070	72	165	441	3.36	53	23	37.21	196.470	280171	41	222	351	3.73	53	15	57.84	210.390
161070	68	159	425	3.30	53	22	36.57	182.450	290171	42	220	342	3.71	53	15	61.00	203.150
171070	68	154	395	3.25	53	22	36.22	164.240	300171	43	170	332	3.29	53	15	50.03	194.520
181070	68	152	382	3.23	53	22	35.80	156.770	310171	43	214	320	3.67	53	15	53.70	184.900
191070	68	157	387	3.28	53	22	36.35	164.050	10271	43	209	309	3.62	53	15	60.68	174.370
201070	68	168	405	3.39	53	22	37.52	183.710	20271	42	204	302	3.58	53	15	59.03	166.340
211070	66	178	423	3.49	53	21	38.50	203.290	30271	42	194	294	3.50	53	15	54.42	154.000
221070	66	186	440	3.56	53	21	39.36	220.370	40271	45	187	289	3.44	53	16	53.36	145.920
231070	66	190	456	3.60	53	21	39.72	233.930	50271	44	183	282	3.40	53	16	57.10	139.340
241070	66	190	448	3.60	53	21	39.72	229.420	60271	44	183	278	3.40	53	16	57.10	137.360
251070	66	187	441	3.57	53	21	39.45	222.660	70271	44	183	280	3.40	53	16	57.10	138.350
261070	66	181	423	3.46	53	21	38.21	187.590	80271	42	181	281	3.39	53	15	50.56	137.320
271070	64	175	397	3.46	53	21	38.21	174.060	90271	41	179	278	3.37	53	15	52.10	134.360
281070	64	171	377	3.42	53	21	37.62	165.180	100271	41	175	270	3.33	53	15	55.09	127.570
291070	64	169	362	3.40	53	21	37.62	165.180	110271	42	171	264	3.30	53	15	49.48	121.890
301070	64	168	349	3.39	53	21	37.52	159.310	120271	43	172	263	3.31	53	15	48.91	122.140
311070	64	172	344	3.43	53	21	37.92	159.770	130271	40	178	266	3.36	53	14	52.86	127.840
11170	64	160	356	3.50	53	21	38.81	173.020	140271	40	185	277	3.42	53	14	55.23	138.360
21170	64	187	362	3.57	53	21	39.45	182.770	150271	40	199	294	3.54	53	14	56.94	157.950
31170	63	189	360	3.59	53	20	39.63	183.710	160271	40	216	320	3.68	53	14	58.81	186.620
41170	63	189	359	3.59	53	20	39.63	183.020	170271	42	233	345	3.82	53	15	56.08	217.040
51170	63	186	350	3.56	53	20	39.36	175.770	180271	42	248	376	3.93	53	15	60.97	251.770
61170	63	184	338	3.54	53	20	39.18	167.920	190271	42	260	397	4.02	53	15	61.21	278.690
71170	63	183	333	3.53	53	20	39.09	164.540	200271	42	269	414	4.08	53	15	66.33	300.690
81170	63	183	334	3.53	53	20	39.09	165.030	210271	43	276	422	4.13	53	15	66.92	318.950
91170	61	184	338	3.54	53	20	39.18	167.920	220271	42	282	441	4.17	53	15	69.40	335.780
101170	61	183	331	3.53	53	20	39.09	163.550	240271	44	287	472	4.21	53	16	65.56	365.750
111170	61	181	308	3.51	53	20	38.90	150.520	250271	45	289	497	4.22	53	16	68.93	387.810
121170	61	180	301	3.50	53	20	38.81	146.270	260271	45	297	528	4.28	53	16	65.47	423.400
131170	59	192	295	3.52	53	19	38.99	144.760	270271	46	316	573	4.41	53	16	65.10	468.880
141170	59	189	300	3.55	53	19	39.63	153.090	280271	46	332	630	4.51	53	16	69.74	564.730
151170	57	193	299	3.62	53	19	40.10	155.810	10371	46	349	654	4.62	53	16	69.42	616.260
161170	57	194	290	3.63	53	19	40.18	151.900	20371	47	365	714	4.72	53	16	69.92	703.650
171170	55	195	278	3.64	53	18	40.27	146.370	30371	46	384	805	4.83	53	16	75.03	834.620
181170	57	196	267	3.65	53	19	40.35	141.300	40371	42	398	892	4.91	53	15	78.18	954.540
191170	57	197	359	3.66	53	19	40.44	137.760	50371	46	399	950	4.92	53	16	74.88	23.430
201170	55	197	253	3.66	53	18	40.44	134.570	60371	46	400	0	4.92	53	16	79.71	80.000
211170	57	194	241	3.63	53	19	40.18	126.240	70371	46	402	37	4.93	53	16	81.25	125.560
221170	57	190	231	3.60	53	19	39.72	118.500	80371	46	402	58	4.93	53	16	81.25	148.350
231170	55	185	221	3.55	53	18	39.27	110.390	90371	46	402	65	4.93	53	16	81.25	155.950
241170	54	181	219	3.51	53	18	38.90	107.030	100371	46	401	64	4.93	53	16	76.35	151.790
251170	55	178	219	3.49	53	18	38.50	105.250	110371	46	400	62	4.92	53	16	75.71	146.960
261170	54	175	224	3.46	53	18	38.21	105.840	120371	50	402	56	4.93	53	17	81.25	146.180
271170	54	173	226	3.44	53	18	38.02	105.560	130371	50	403	45	4.94	53	17	77.81	137.360
281170	54	171	224	3.42	53	18	37.82	103.420	140371	64	404	969	4.95	53	21	74.52	56.790
291170	54	170	218	3.41	53	18	37.72	100.060	150371	64	405	916	4.95	53	21	79.27	23.520
301170	54	170	206	3.41	53	18	37.72	94.550	160371	64	404	973	4.95	53	21	74.52	61.350
11270	54	171	195	3.42	53	18	37.82	90.030	170371	64	403	945	4.94	53	21	77.81	28.250
21270	52	171	181	3.42	53	18	37.82	83.570	180371	64	402	910	4.93	53	21	81.25	967.710
31270	54	169	170	3.40	53	18	37.62	77.570	190371	64	404	878	4.95	53	21	74.52	957.720
41270	54	166	161	3.37	53	18	37.31	72.160	200371	61	403	851	4.94	53	20	77.81	925.970
51270	54	161	154	3.32	53	18	36.79	66.940	210371	64	399	820	4.92	53	21	74.88	883.390
61270	54	156	150	3.27	53	18	36.24	63.180	220371	66	396	746	4.90	53	21	76.64	840.390
71270	52	149	148	3.20	53	18	35.45	59.540	230371	66	391	762	4.87	53	21	76.76	804.440
81270	52	141	140	3.12	53	18	34.50	53.300	240371	68	385	713	4.84	53	22	71.91	741.160
91270																	

SIMHE SPORT									
DATE	TN	DIS	SED	VEL	SLP	SVEL	DEP	TSED	T/DO
F		CFS	PPM	F/S		F/S	FT		
1000		1000			10-7	10-3		1000	
243471	64	183	210	3.40	53	21	57.10	103.760	
253471	64	180	215	3.38	53	21	51.33	104.490	
263471	65	199	219	3.54	53	21	56.94	105.840	
273471	66	177	225	3.35	53	21	53.61	107.530	
283471	66	174	228	3.32	53	21	55.82	107.110	
293471	69	176	223	3.34	53	22	54.35	110.720	
303471	65	177	237	3.35	53	22	53.61	113.260	
10571	67	177	240	3.35	53	21	53.61	114.700	
20571	67	176	246	3.34	53	21	54.35	116.900	
30571	68	176	247	3.34	53	22	54.35	117.370	
40571	68	175	249	3.33	53	22	55.09	117.650	
50571	68	175	251	3.33	53	22	55.09	118.600	
60571	68	173	252	3.32	53	22	48.33	117.710	
70571	68	173	255	3.32	53	22	48.33	199.110	
80571	68	174	258	3.32	53	22	55.82	121.210	
90571	68	175	259	3.33	53	22	55.09	122.380	
100571	69	175	260	3.33	53	22	55.09	122.850	
110571	70	177	261	3.35	53	22	53.61	124.730	
120571	70	177	261	3.35	53	22	53.61	124.730	
130571	70	191	269	3.47	53	22	57.67	138.720	
140571	69	207	288	3.61	53	22	55.09	160.960	
150571	69	213	306	3.66	53	22	55.05	175.980	
160571	68	219	325	3.71	53	22	54.44	192.170	
170571	68	229	355	3.78	53	22	62.89	219.500	
180571	68	240	390	3.87	53	22	59.78	252.720	
190571	69	249	430	3.94	53	22	59.08	289.090	
200571	70	263	460	4.04	53	22	63.00	326.650	
210571	70	277	490	4.14	53	22	64.60	366.470	
220571	69	288	511	4.22	53	22	63.21	397.350	
230571	70	292	549	4.24	53	22	69.79	432.830	
240571	71	296	562	4.27	53	22	67.96	449.150	
250571	71	296	559	4.27	53	22	67.96	446.750	
260571	71	296	551	4.27	53	22	67.96	440.360	
270571	72	292	530	4.24	53	23	69.79	417.850	
280571	72	288	505	4.22	53	23	63.21	392.690	
290571	73	281	478	4.17	53	23	63.51	362.660	
300571	73	275	443	4.13	53	23	61.12	328.930	
310571	72	267	403	4.07	53	23	62.53	290.500	
320571	72	257	361	4.00	53	23	59.35	250.500	
330571	73	247	312	3.92	53	23	62.92	208.070	
340571	73	236	271	3.84	53	23	58.86	172.680	
350571	72	221	242	3.72	53	23	59.40	144.400	
360571	74	207	206	3.61	53	23	55.09	115.130	
370571	73	200	192	3.55	53	23	55.73	103.680	
380571	73	192	189	3.48	53	23	56.58	97.980	
390571	74	186	187	3.43	53	23	54.29	93.910	
400571	74	180	184	3.38	53	23	51.33	89.420	
410571	78	177	176	3.35	53	24	53.61	85.070	
420571	76	175	177	3.33	53	24	53.09	83.630	
430571	76	173	176	3.32	53	24	48.33	82.210	
440571	77	171	176	3.30	53	24	49.48	81.260	
450571	77	168	185	3.27	53	24	51.11	83.920	
460571	79	167	196	3.26	53	25	51.62	88.380	
470571	80	166	210	3.25	53	25	52.12	94.120	
480571	79	167	237	3.26	53	25	51.62	106.860	
490571	79	166	249	3.25	53	25	52.12	111.600	
500571	79	163	254	3.22	53	25	53.51	111.790	
510571	79	159	254	3.19	53	25	46.78	109.040	
520571	79	155	252	3.15	53	25	47.69	105.460	
530571	82	153	250	3.13	53	25	48.00	103.270	
540571	82	153	251	3.13	53	25	48.00	103.690	
550571	82	156	263	3.16	53	25	47.49	110.780	
560571	82	160	273	3.20	53	25	46.50	117.940	
570571	82	164	285	3.23	53	25	53.06	126.200	
580571	83	167	298	3.26	53	25	51.62	129.860	
590571	83	168	288	3.27	53	25	51.11	130.640	
600571	83	167	282	3.26	53	25	51.62	127.150	
610571	84	164	273	3.23	53	26	53.06	120.880	
620571	84	158	264	3.18	53	26	47.04	112.620	
630571	84	153	253	3.13	53	26	48.00	104.510	
640571	84	148	240	3.08	53	26	48.32	95.900	
650571	84	144	227	3.04	53	26	48.07	88.260	
660571	84	140	220	3.00	53	26	47.33	83.160	
670571	81	137	212	2.97	53	25	46.44	78.420	
680571	82	134	213	2.94	53	25	45.27	77.060	
690571	82	132	204	2.92	53	25	44.33	72.710	
700571	82	129	200	2.89	53	25	42.69	69.660	
710571	86	125	199	2.84	53	26	48.13	67.160	
720571	82	122	192	2.81	53	25	45.55	63.240	
730571	82	118	183	2.77	53	25	41.72	58.300	
740571	87	113	174	2.71	53	26	44.13	53.090	
750571	87	109	169	2.67	53	26	38.84	49.740	
760571	87	105	163	2.62	53	26	40.77	46.210	
770571	88	101	158	2.57	53	27	42.05	43.090	
780571	88	98	153	2.54	53	27	36.44	40.480	
790571	88	96	153	2.51	53	27	40.36	39.660	
800571	88	97	158	2.52	53	27	42.53	41.380	
810571	88	100	165	2.56	53	27	40.15	44.550	
820571	87	105	178	2.62	53	26	40.77	50.460	
830571	86	110	189	2.68	53	26	40.18	56.130	
840571	86	114	202	2.72	53	26	45.42	62.180	
850571	85	119	213	2.78	53	26	42.71	68.440	
860571	84	123	225	2.82	53	26	46.44	74.720	
870571	79	125	229	2.84	53	25	48.13	77.270	
880571	79	127	240	2.87	53	25	41.44	82.300	
890571	81	130	267	2.90	53	25	43.26	93.720	
900571	81	142	289	3.02	53	25	47.76	110.800	
910571	82	156	316	3.16	53	25	47.49	133.100	
920571	81	162	332	3.21	53	25	53.93	145.220	
930571	81	166	353	3.25	53	25	52.12	158.210	
940571	84	167	368	3.26	53	26	51.62	165.910	
950571	84	166	383	3.25	53	26	52.12	171.660	
960571	84	163	393	3.22	53	26	53.51	172.960	
970571	84	158	396	3.18	53	26	47.04	169.930	

SIMHE SPORT									
DATE	TN	DIS	SED	VEL	SLP	SVEL	DEP	TSED	T/DO
F		CFS	PPM	F/S		F/S	FT		
1000		1000			10-7	10-3		1000	
50871	84	155	396	3.15	53	26	47.69	165.730	
60871	84	152	392	3.12	53	26	48.11	160.890	
70871	84	151	379	3.11	53	26	48.21	154.520	
80871	84	151	375	3.11	53	26	48.21	152.890	
90871	84	154	377	3.14	53	26	47.85	156.760	
100871	84	157	382	3.17	53	26	47.28	161.970	
110871	83	159	393	3.19	53	25	46.78	168.710	
120871	84	161	400	3.20	53	26	54.33	173.890	
130871	86	161	415	3.20	53	26	54.33	180.400	
140871	86	163	425	3.22	53	26	53.51	187.042	
150871	84	164	426	3.23	53	26	53.06	188.630	
160871	86	166	427	3.25	53	26	52.12	191.390	
170871	82	165	421	3.24	53	25	52.60	187.560	
180871	82	162	408	3.21	53	25	53.93	178.660	
190871	82	156	386	3.16	53	25	47.49	162.590	
200871	81	149	352	3.09	53	25	48.31	141.610	
210871	81	137	324	2.97	53	25	46.44	119.850	
220871	81	126	292	2.86	53	25	46.78	99.340	
230871	81	117	262	2.76	53	25	46.70	82.772	
240871	81	108	234	2.65	53	25	45.61	68.230	
250871	81	103	213	2.60	53	25	37.54	59.280	
260871	81	99	192	2.55	53	25	38.28	51.320	
270871	85	97	180	2.52	53	26	42.53	47.140	
280871	81	96	171	2.51	53	25	40.36	44.370	
290871	81	96	171	2.51	53	25	40.36	44.320	
300871	81	98	171	2.54	53	25	36.44	45.250	
310871	81	99	174	2.55	53	25	38.28	46.510	
320871	81	100	178	2.56	53	25	40.15	48.060	
330871	81	101	180	2.57	53	25	42.05	49.090	
340871	81	103	181	2.60	53	25	37.54	50.340	
350871	81	105	178	2.62	53	25	4		