TABULATED DATA

WITH EXPLANATORY NOTES

RELATING TO

FLOW OF WATER

UNDER PRESSURE

THROUGH

CLEAN CLOSED PIPES

BY

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PREFACE

SOME years ago, when the author was located at Denver, Colorado, in the capacity of Chief Engineer of The Denver Union Water Company, he collected a mass of data relating to the Construction and Maintenance of Continuous Wood-stave Pipe, with a view of getting the matter into tangible shape for publication.

It may be of interest to note that Denver was the home of this class of pipe and that the entire water supply for that city is obtained through more than one hundred miles of continuous wood-stave pipe, varying in size from 30 inches to 48 inches in diameter.

While engaged in the preparation of tables indicating the carrying capacities of continuous wood-stave pipe, the author was strongly impressed with the need of special investigation touching this most important factor of pipe design.

At that time the formula usually employed in designing pipe of this character was Kutter's with $n=0.010$, although other formulæ had also been used, among them being the expression $H_f=mV^{1.73}$.

It was deemed desirable as well as necessary and essential to a more complete understanding of the subject, to compare results of flow-data obtained by several well-established and accepted formulæ, upon a com-

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mon basis, the same to apply to sizes of pipe and slopes usually involved in common practice.

Accordingly, five well-known formulæ were selected by means of which the following tabulated values were computed. Five-place logarithms were employed in these computations and as a ready means of comparing results derived from these formulæ, the value of c in the expression $v = c\sqrt{rs}$, has been determined for each size of pipe and for slopes as indicated in the extended tables.

It is believed that an inspection of these comparative values will assist in the proper dimensioning of pipe conduits to meet any desired service.

GEORGE T. PRINCE.

OMAHA, NEBRASKA,
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UNIV. OF CALIFORNIA

FLOW OF WATER

FLOW OF WATER IN CLOSED PIPES

THE flow of water in any channel is subject to the law governing falling bodies, commonly expressed $v=\sqrt{2gh}$; in which v equals the velocity in feet per second, g equals the "acceleration of gravity" and h equals the head of water in feet, producing the flow.

The value of g varies from about 32.0894 feet per second *per second*, at the equator sea-level, to 32.254 at the poles. Its value also varies slightly with elevation above sea-level. For all ordinary calculations applying to the United States, the value of g is generally assumed as 32.16 and $\sqrt{2g}$ as 8.02.

If the flow were not retarded by friction, the amount of discharge through a closed pipe would be expressed in cubic feet per second by the product of the following three factors: the internal cross-section of the pipe (expressed in square feet), the square root of $2g$ (equal to 8.02), and the square root of the head of water producing the flow, expressed in feet; that is the vertical distance of the source of supply above the axis of the pipe, measured at the point of discharge.

Because of the retarding influence of friction, the amount of flow is less than is indicated by the above expression and the amount of the frictional resistance can be expressed by the difference between the observed velocity in feet per second and that indicated by the expression $v=\sqrt{2gh}$ or $8.02\sqrt{h}$. In other words, the frictional resistance is equal to the accelerating force.

The discussions which have led up to our present knowledge of the laws governing the flow of water in channels have been most varied in their conclusions, and though many errors and false results appear, a study of them is of great interest to one who desires thoroughly to analyze the subject of hydraulics.

Galileo has been quoted as saying that he found it easier to determine the laws that govern the motion of the heavenly bodies than those pertaining to the flow of water in channels. It was owing to his ignorance of the laws relating to the flow of water that important proposed river improvements were abandoned. Since that time, to the present day, experimenters and investigators have been gradually groping their way out of the darkness and ignorance surrounding the laws governing the flow of water until to-day, we are enabled to calculate with reasonable accuracy the amount of water that can be conveyed through open or closed channels, constructed of different materials and subjected to varying conditions of grades and pressures.

In the light of our present knowledge it seems strange to read that the Romans, who were so observing and thorough in other lines of thought and investigation, disregarded head or pressure in their calculation of flow of liquids in conduits, regarding only the size of the conduit; and equally strange does it appear that a man so brilliant and original in his work as was Galileo, should contend that the velocity of a stream is dependent solely upon the head or slope and entirely independent of the length or distance traveled by the flow.

It was not until investigators realized that correct results in the determination of stream-flows must depend upon observation of actual conditions and not upon mere theorizing, that a better understanding of the subject was evolved.

In the year 1775, M. Chezy, a noted French engineer, suggested the formula $v = c\sqrt{rs}$, by which to determine the velocity of water flowing in conduits, in which expression,

v = velocity of flow in feet per second;

c = a coefficient to be assumed for each case under consideration, and is to be determined by experiments under like conditions;

r = the mean hydraulic radius (usually expressed in feet), which for closed pipes $= \dfrac{\text{diameter in feet}}{4}$;

s = slope $= \dfrac{\text{height or head in feet}}{\text{horizontal length in feet}}$.

Previous to the time M. Chezy suggested his formula, the roughness of the sides and bottom of the channel had not been considered as producing any retarding influence upon the flow of water. It was believed that the water immediately covering the holes and projections of a rough surface became in itself a smooth surface, over which the flowing water passed without material loss of motion. Experiments demonstrated the falsity of this assumption and it became generally recognized that the ratio of the cross-section of the flowing current to the wetted perimeter should be incorporated in a formula intended to express the velocity of flowing water.

The Chezy formula, above indicated, appears to-day in various modified forms and may be used to determine the amount of flows, either in open or closed channels. Probably the best-known modification of this basic formula is that enunciated by two eminent Swiss engineers, E. Ganguillet and W. R. Kutter, and familiarly known as the Kutter formula, which is expressed as follows:

$$v=\left[\frac{\frac{1.811}{n}+41.6+\frac{.00281}{s}}{1+\left(41.6+\frac{.00281}{s}\right)\times\frac{n}{\sqrt{r}}}\right]\times\sqrt{rs},$$

in which v = mean velocity in feet per second;

r = mean hydraulic radius, expressed in feet and equals the cross-section of the stream divided by the wetted perimeter in linear feet. The wetted perimeter is the linear measurement of the sides and bottom of the channel in contact with the flow;

s = slope of the water surface $=\frac{\text{fall of water surface}}{\text{horizontal length of flow}}$;

n = coefficient of roughness of the sides and bottom of the channel.

It will be noted that the bracketed portion of the second term of the formula corresponds with the c in the expression $v=c\sqrt{rs}$.

From inspection of the Kutter formula, it is evident that the accuracy of the results obtained by its use is dependent upon the value assumed for n. A little deviation in the assumed value of this coefficient will very materially affect the value of c, as is shown below. Let the value of r be assumed as 0.3 foot, corresponding to a diameter of 14.4 inches.

Slope.	Value of n.	Value of c.
0.1 : 1000	.009	125
	.010	109
	.011	97
	.012	87
	.013	78
0.2 : 1000	.009	133
	.010	116
	.011	103
	.012	92
	.013	83
0.4 : 1000	.009	138
	.010	120
	.011	107
	.012	96
	.013	87
1.0 : 1000	.009	141
	.010	124
	.011	109
	.012	98
	.013	89
10 : 1000	.009	143
	.010	125
	.011	111
	.012	100
	.013	90

From an inspection of the above tabulated values of n and c, it is apparent that the value of n must be selected with great care; a change of only a unit in the third decimal place will make a marked change in the value of c.

The values of n have been determined by experimenting with channels made of different materials, possessing varying degrees of roughness. The results of these experiments are given by Kent substantially as follows:

1. Smooth, well-planed timber, in perfect order and alignment..... .009

2. Neat cement; planed timber; glazed, coated or annealed stoneware and iron pipes, all in perfect order ..... .010
3. Cement with one-third sand, in good condition, also for iron, cement and terra-cotta pipes, well jointed and in good condition ..... .011
4. Unplaned timber, when perfectly continuous on the inside ..... .012
5. Ashlar masonry and well-laid brickwork; ordinary metal and stoneware pipes in good condition but not new; also materials mentioned under item 2, when imperfect or in inferior condition ..... .013
6. Second-class or rough-faced brickwork; well-dressed stonework; foul or slightly tuberculated iron, cement and terra-cotta pipes, with imperfect joints and in bad order; canvas lining on wooden frames ..... .015
7. Brickwork, ashlar masonry and stoneware, in inferior condition; tuberculated iron pipes; rubble in cement, in good condition; fine gravel, or particles ranging from $\frac{1}{8}$ to $\frac{2}{3}$ inch in diameter, well rammed, and generally the materials mentioned under item 5, when in bad condition ..... .017
8. Rubble in cement in inferior condition; coarse rubble laid dry; brickwork in very poor condition; coarse gravel of particles ranging from 1 to $1\frac{1}{2}$-inch in diameter, well rammed; canals with beds and banks of very firm, regular gravel, carefully trimmed and rammed in defective places; rough rubble with bed partially covered with silt and mud; wooden troughs, with battens on the inside two inches apart; earth trimmed to perfect condition .. .020
9. Canals in earth in excellent condition ..... .0225
10. Canals and rivers in earth, of tolerably uniform cross-section, slope and alignment, in moderately good condition and free from stones and weeds ..... .025
11. Canals and rivers in earth, somewhat inferior to average conditions ..... .0275

12. Canals and rivers in earth, in rather bad condition, obstructed by occasional weeds, stones and other detritus..... .030
13. Canals and rivers in earth, in very bad condition, containing stones and weeds in great quantities.. .035

Information published by the U. S. Geol. Survey indicates a more conservative selection of the value of n than noted above, as for instance materials included under item 5 would be classified by the Government as under item 6, having a value of .015, and so on down the list. It requires the exercise of the keenest judgment, born of long experience, to select the value of n that will give results even roughly approximating the truth.

Different experimenters will determine different values of n with the same conduit, and the application by another party to another conduit of the results obtained by these experimenters is simply the exercise of the guessing power of that individual. It may or may not approximate the truth.

Considering the unwieldy and complex expression of the Kutter formula, coupled with the fact that the value of n is so largely a matter of speculation, the author contends that one may as well guess the value of c in the Chezy formula and save his "gray matter"; for in so doing, it is possible to differentiate to a greater degree of nicety than can be done in valuing n in the Kutter formula.

There are so many writings which discuss at length the results of ancient hydraulicians to which the reader can have access, if he desires to make a careful study of them, that it is not deemed expedient to discuss them in this instance, but rather to confine our attention to a few formulæ of more recent date, which more closely conform to modern practice, the results of many years of experience—an advantage which the older hydraulicians did not possess.

H. D'Arcy, a French engineer of large practical experience, realized the necessity of carefully conducted experiments, in order to deduce satisfactory formulæ relating to the flow of water. From his practical knowledge of the subject, he was amply qualified to conduct a series of observations upon the

flow of water in pipes and open channels, that have resulted in giving to engineers most helpful information.

As a result of experiments, he devised the following formula, which is popularly known as the D'Arcy Formula:

$$v=\sqrt{\frac{1}{.00030904+\frac{.00002588}{d}}}\sqrt{\frac{hd}{L}}$$

$$=\sqrt{\frac{1}{.00007726+\frac{.00000647}{d}}}\sqrt{rs}.$$

In which s = slope $=\frac{h}{L}$; d = internal diameter in feet; r = mean hydraulic radius in feet; v = velocity in feet per second.

If the D'Arcy formula, relating to the flow of water in pipes, as above expressed, is not more generally employed than any other formula, it is certainly one of the most popular in use, and in the opinion of the author most deservedly so. In an experience of more than thirty years in the design and operation of public water systems, this formula has most satisfactorily aided in solving the many varied problems that have demanded the author's attention.

It has been thought desirable to reduce the formulæ, as advocated by Merriman, Fanning, Gould and D'Arcy, to the simple form of the Chezy formula. These formulæ all relate to clean cast-iron pipes. With pipes running full, the Chezy formula can be reduced from the form $v=c\sqrt{rs}$ to $v=\frac{c}{2}\sqrt{\frac{hd}{L}}$.

Remembering that $r=\frac{d}{4}$, $s=\frac{h}{L}$ and $\frac{hd}{4L}=\sqrt{rs}$,

Merriman's formula,

$$v=\sqrt{\frac{2ghd}{fL}}, \text{ reduces to } v=\sqrt{\frac{2g}{f}}\sqrt{\frac{hd}{L}}=\sqrt{\frac{8g}{f}}\sqrt{rs}.$$

Fanning's formula,

$$v=\sqrt{\frac{2ghd}{4mL}}, \text{ reduces to } v=\sqrt{\frac{2g}{4m}}\sqrt{\frac{hd}{L}}=\sqrt{\frac{2g}{m}}\sqrt{rs}.$$

Gould's formula,

$$v=\sqrt{\frac{hd}{cL}}, \text{ reduces to } v=\sqrt{\frac{1}{c}}\sqrt{\frac{hd}{L}}=\frac{2}{\sqrt{c}}\sqrt{rs}.$$

From the above we have

$$\frac{c}{2}=\sqrt{\frac{2g}{f}}=\sqrt{\frac{2g}{4m}}=\sqrt{\frac{1}{c}}=\sqrt{\frac{1}{.00030904+\frac{.00002588}{d}}}.$$

Squaring and reducing we obtain the following values for c:

Merriman.....	$\sqrt{\frac{8g}{f}}$
Fanning.....	$\sqrt{\frac{2g}{m}}$
Gould.....	$\sqrt{\frac{4}{c}}=\frac{2}{\sqrt{c}}$
D'Arcy.....	$\sqrt{\frac{1}{.00007726+\frac{.00000647}{d}}}$

In general practice the velocity of the water in supply and distribution mains will range from 2 to 5 feet per second. With this fact in view, the values of c, as given in the previous table for each size of pipe and corresponding to velocities of 2, 3, 4, and 5 feet, have been added together and average values from the four formulæ considered, have thus been obtained. These results have been plotted upon logarithmic paper and a correction line drawn.

The average values of c as derived from the four formulæ, adapted to various-sized pipe and including velocities of 2, 3, 4 and 5 feet, are given below, together with the corrected values.

It should be borne in mind that the formulæ from which these values are obtained contemplate clean cast-iron pipe. Some values derived from Flynn's tables are added, as being of interest:

TABLE I

Diameter, Inches.	Averaged Values.	Flynn.	Corrected values from Plot.
3	99.05	.....	103.0
4	101.18	.....	103.7
6	104.00	105.3	105.1
8	106.07	107.2	106.3
10	107.59	108.5	107.4
12	108.38	109.3	108.4
14	109.74	109.9	109.4
16	110.93	110.4	110.4
18	111.60	110.7	111.4
20	112.66	111.0	112.3
22	.....	.....	113.2
24	114.51	111.5	114.1
26	.....	.....	115.0
28	.....	.....	115.9
30	116.77	111.9	116.8
32	.....	.....	117.6
34	.....	118.4	118.4
36	119.18	112.2	119.2
38	.....	.....	120.0
40	.....	.....	120.8
42	120.97	112.4	121.6
44	.....	.....	122.4
46	.....	.....	123.2
48	123.02	112.6	124.0
50	.....	.....	124.8
52	.....	.....	125.6
54	.....	.....	126.4
56	.....	.....	127.1
58	.....	.....	127.8
60	129.64	112.8	128.5

It will be observed that all the formulæ considered above indicate that the frictional resistance to the flow of water varies as the square of the velocity.

In a paper presented before the American Society of Civil Engineers in 1902 by Theron A. Noble, on "Flow of Water in Wood Pipes," reference is made to experiments conducted by Mr. Noble, as well as by Mr. Arthur L. Adams and others. In discussing this paper, Mr. E. W. Schoder shows that the results of the experiments noted indicate that the loss of head or frictional resistance "varies about as the 1.73 power of the velocity," instead of as the square of the velocity, as assumed in most of the formulæ extant and in general use.

Mr. Schoder, in discussing this paper, makes use of the formula $H_f = mv^n$, in which H_f represents the loss of head or frictional resistance per unit of distance, and v the velocity in feet per second, n being a coefficient which varies with each size of pipe.

This form of expression is probably as simple as can be devised for showing the relation existing between velocity and loss of head in pipes conveying water under pressure. Assuming H to represent the loss of head per 1000 feet for *clean cast-iron pipe*, and to vary as the square of the velocity, it will be interesting to determine the value of m for each size of pipe, first, when c in the Chezy formula has a constant value of 100 for all sizes of pipe; second, when c varies with the size of the pipe, as determined by averaging results obtained from formulæ advocated by Merriman, Fanning, Gould and D'Arcy, as heretofore explained; and third, when c has the values determined by the D'Arcy formula, which values are constant for all velocities, for any particular size of pipe, but vary with the size of the pipe.

It is evident that m equals H when v equals 1 foot per second; hence, the values of m in the expression $H_f = mv^n$ may be determined by assuming v to equal unity. The values of m have thus been determined, subject to the assumptions above noted and are given in Table 2.

Frictional resistance varies very nearly as the square of the velocity and inversely as the product of c^2r, as indicated in the expression, slope $= \frac{v^2}{c^2r} = \frac{4v^2}{c^2d}$.

If the value of c were constant for all values of d, it is apparent that the frictional resistance for like velocities would vary inversely with the diameter, but such is not the case if c varies with the diameter.

Both theory and practice are essential to a well-grounded understanding of the principles required by the hydraulic engineer, but the practical man needs to be continually on his guard against being misled by a class of technical writers who are disposed to treat engineering as an exact science, whereas it is so only in name. Unpracticed and inexperienced in building and maintaining engineering works, many of these writers consider only the theoretical side of a problem.

This class of writers reminds the author of a young engineer, bright and particularly apt in all mathematical work, but who was so exact in his ideas that he did not know when to drop excessive refinement and exercise good common sense. In cross-sectioning for earth-work stakes, he would try to set the stakes to a thousandth of a foot. Had the rodman pressed a pound weight upon the rod, his calculation would have been for naught. As it was, the result was vexation for the rodman and unwarrantable slowness in the work; for that reason this particular engineer was kept employed upon office calculations.

TABLE 2

Values of m in the expression $H_f = mv^n$, assuming H_f to represent the loss of head per 1000 feet of clean cast-iron pipe and to vary as the square of the velocity, that is, n equals 2, other conditions as noted.

Int. Diam. Inches.	Coef. $c = 100$.	Aver. values of c from Merriman, Fanning, Gould and D'Arcy.	Values of c by D'Arcy.
4	1.200	1.320	1.050
6	0.800	0.815	0.690
8	0.600	0.575	0.510
10	0.480	0.440	0.405
12	0.400	0.352	0.330
14	0.343	0.295	0.280
16	0.300	0.250	0.245
18	0.267	0.217	0.219
20	0.240	0.190	0.194
22	0.218	0.172	0.174
24	0.200	0.155	0.160
26	0.185	0.140	0.146
28	0.171	0.128	0.135
30	0.160	0.117	0.125
32	0.150	0.109	0.117
34	0.141	0.101	0.110
36	0.133	0.094	0.103
38	0.126	0.087	0.096
40	0.120	0.082	0.091
42	0.114	0.077	0.086
46	0.104	0.070	0.078
48	0.1000	0.0668	0.0760
50	0.0960	0.0635	0.0728
52	0.0925	0.0605	0.0700
54	0.0889	0.0577	0.0673
56	0.0857	0.0552	0.0649
58	0.0828	0.0530	0.0629
60	0.0800	0.0510	0.0610
72	0.0670	0.0408	0.0500
84	0.0571	0.0336	0.0420
96	0.0500	0.0290	0.0367
100	0.0480	0.0273	0.0350

Attention has already been called to the fact that some experimenters claim that the resistance to flow in a closed pipe does not vary as the square of the velocity. Professor Gardner S. Williams, in discussing Mr. Noble's paper, referred to above, states that "in 1808 Dr. Thomas Young suggested, in an address before the Royal Society, that the exponent of the term indicating the velocity was more nearly 1.8. Later, in 1855, Thomas Hawksley made an extended exposition of the same view, and in 1873 Mr. Lampe presented the results of his experiments on the Danzig pipe line as expressed by his well-known formula

$$v = 203.3\, r^{0.694} s^{0.555}$$
$$= 77.68\, d^{0.694} s^{0.555},$$

r = the mean hydraulic radius,

s = slope = $\dfrac{\text{head or fall}}{\text{horizontal projection of slope}}$,

d = diameter in feet.

Below are given the results of a number of experiments which are interesting to study. (See Trans. Am. Soc. C.E., Vol. 49.)

Date of Test.	Experimenter.	Int. Diam. of Pipe. Inches.	Material.	H_f per 1000 Ft.	
	A. L. Adams	14.04	Wood	0.300	$v^{1.73}$
1902	T. A. Noble	44.50	Wood	0.125	$v^{1.73}$
	T. A. Noble	54.18	Wood	0.0815	$v^{1.73}$
1897	Marx, Wing and Hoskins	72.50	Wood	0.062	$v^{1.73}$
1899	Marx, Wing and Hoskins	72.50	Wood	0.048	$v^{1.94}$
1904	Schoder and Gehring	8.006	C. I.	0.59	$v^{1.91}$
1908	Schoder and Gehring	6.075	W. I.	0.60	$v^{1.94}$
	Schoder and Gehring	5.943	Steel Riv.	0.80	$v^{1.85}$
	Schoder and Gehring	5.871	Steel Riv.	0.97	$v^{1.92}$
	Schoder and Gehring	5.066	W. I.	0.99	$v^{1.91}$
	Schoder and Gehring	5.013	Brass	0.92	$v^{1.79}$
	Schoder and Gehring	4.078	W. I.	1.18	$v^{1.95}$
	Schoder and Gehring	4.084	Steel Riv.	1.34	$v^{1.85}$
	Schoder and Gehring	4.084	Steel Riv.	1.45	$v^{1.84}$
	Schoder and Gehring	3.120	W. I.	1.62	$v^{1.91}$
	Schoder and Gehring	2.067	W. I.	3.15	$v^{1.98}$

An inspection of the above-recorded results indicates how indeterminate and uncertain is the value of the exponent of v. It seems to be materially affected by the condition of roughness

of the interior walls of the pipe, and hence the character of the material forming the pipe is an essential factor.

Especial attention is drawn to the different results obtained by the same experimenters of the 72½-inch pipe at Ogden, Utah. In 1897 the experimenters ascertained the value of the exponent n to be 1.73, whereas two years later it was found by the same experimenters to be 1.94. Was this difference due to errors of observation or to the changed condition of the internal walls of the pipe?

While it may be of much interest to a class of investigators and technical writers to determine to a "hair-splitting" degree the exact value of the exponent of v, and though there seems to be good reason for believing that n approximates 1.73, with pipe in good smooth condition, yet the practical man may rightly hesitate to follow any but an absolutely safe course, and provide in his design for a "factor of ignorance," for he is dealing with conditions and materials that are uncertain to a pronounced degree, and instead of "driving too close to the precipice," he will do well to be guided by Pat, who affirmed that "Bedad he would kape as far from the hole as possible." In saying this, we do not want to be understood as countenancing ill-advised caution, resulting in needless expense. Reason and good judgment, in other words, the exercise of good common sense must be the guide and safeguard of the practical engineer.

An engineer rarely gets credit for work well done. When his estimates of cost and capacity are verified by results, it is only what should be expected and but little, if any, note is made of the fact, but let the capacity of a pipe line fall even a little below the engineer's estimate and that engineer will never outlive the criticism and censure that his mistake will surely arouse. In view of this and the uncertain, varying conditions attaching to materials and other factors which, in greater or less degree affect every piece of engineering construction, it behooves the engineer to avoid hewing too closely to the line in planning his work. *Usually the difference in cost between success and failure is small.* It is far better for all interests concerned to incur the additional expense and secure successful results.

PLOTTING FLOW DATA BY MEANS OF LOGARITHMS

Everybody who has to make many computations and estimates, as is the case with engineers, appreciates the great saving in "gray matter," as well as in time and book space, that can be effected by employing logarithms. Let the reader not drop the benefit of logarithms after he has completed his calculations, but let him satisfy himself that he cannot with profit employ them in plotting his results. In the author's opinion there is no better way to fix a mathematical truth in one's mind than by the use of a diagram. If the reader has not already done so, he is advised to read and carefully study the excellent and practical book entitled "Calculus for Engineers," by John Perry. By means of plots and diagrams, Prof. Perry teaches in a clear, practical and intensely interesting manner, the principles underlying the calculus and their adaptation to Applied Mechanics.

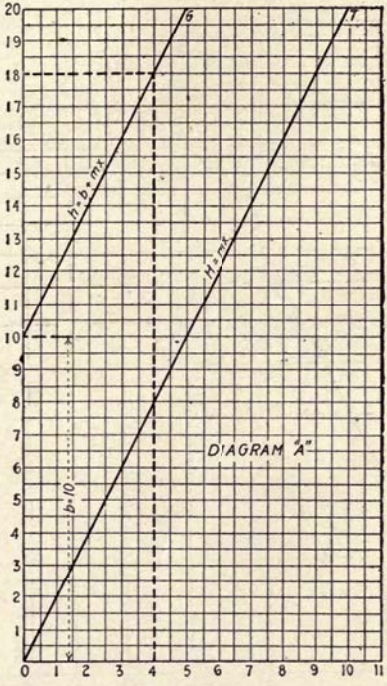
Though it may seem elementary and out of place to insert here a brief explanation relating to the application of logarithms to plotting flow data, it is believed that such an explanation may be of assistance to some readers who may not have given the subject special thought. If we desire to plot the expression $H=mx$, we draw a straight line 0–7 (Diagram A), having a slope of m vertical to one horizontal. The ordinate (vertical distance above horizontal line through 0) opposite to any point in the line will be m times the abscissa (horizontal distance from vertical line through 0) of that point. If instead of $H=mx$, we wish to plot $H=b+mx$, we draw a line parallel with the previous one but through a point vertically above 0 and b distance from it.

To use a concrete case, suppose we wish to plot $H=2x$, the line 0–7 (Diagram A) serves as the multiplier 2.

If we wish to plot $H=10+2x$, we draw our line parallel with 0–7, but through the point 10. If $x=4$, then $H=18$.

If on the other hand, we wish to plot $H=x^m$, we can with profit use logarithms. Instead of spacing our lines as in Diagram A, proportional to the *numbers*, we now space them proportional to the *logarithms* of the numbers, as in Diagram B.

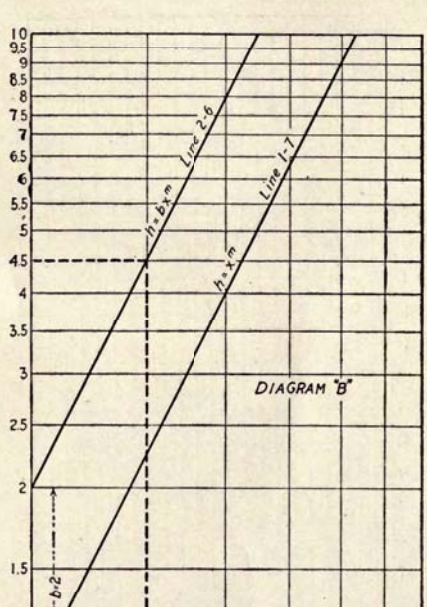
If now we draw the line 1–7 in Diagram B, with the same slope (m vertical to one horizontal) as 0–7 in Diagram A, the ordinate opposite to any point in the line will be the m power of the abscissa of that point, or $H=x^m$. If we draw our line parallel



with 1–7 but above it, passing through a point vertically over 1 and b distance from it, our line represents the expression $H=bx^m$.

Let $x=1.5$ and $b=2$, then $H=2\cdot\overline{1.5^2}$ and we read directly from the ordinate of the point in this line, vertically over 1.5 and obtain $H=4.5$.

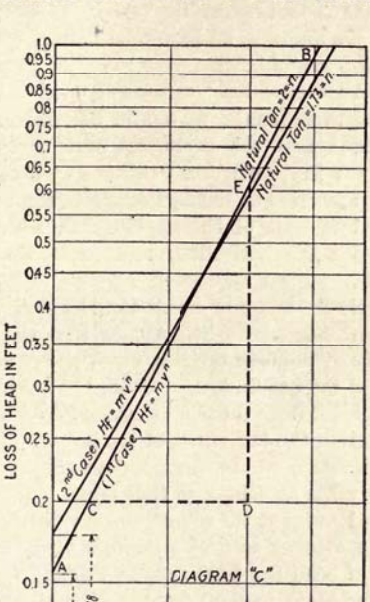
The difference between the two diagrams is, that in Diagram A we space the lines proportional with the numbers and hence obtain simple multiplication, but to multiply a logarithm is to obtain the logarithm of a power of the corresponding number,



hence the line 1–7 in Diagram B, by multiplying the logarithm, correspondingly raises the number to the m power. Diagram A deals with the *numbers*, Diagram B deals with the *logarithms*, hence it is that the line 2–6, in Diagram B, represents the general expression $H = bx^m$ instead of $H = b + mx$, as in Diagram

A, because H is made up of the log b plus the log x, and the sum of these indicates a product.

If any function of a formula varies as a power of another function, the relation between the two can be expressed by a



straight line, through the use of logarithms; not only this, but if we have the results of any set of experiments, giving the loss of head corresponding to two or more rates of flow, we can readily determine a formula to meet the conditions by means of a logarithmic plotting of the results. For instance, suppose we find

by experiment that the loss of head per 1000 feet in a 24-inch pipe line amounts to 0.620 foot, the velocity of flow being 2 feet per second, and with the same pipe line, the loss of head per 1000 feet amounts to 0.35 foot at a velocity of 1.5 foot per second and 0.155 foot when the velocity of flow is but 1 foot per second. We desire to find the relationship existing between the velocity and loss of head.

Plotting the losses of head as shown, upon Diagram C, and connecting the three points, we obtain the straight line *ACEB*. It will be noted that the horizontal and vertical spacing of the lines is not in proportion to the numbers, but instead, spacing is in proportion to the logarithms of the nun bers.

The natural tangent of the angle *ECD*, which the plotted line makes with the horizontal, represents the *pouer* of the velocity in the general expression $H_f = mv^n$. The tangent in this case equals 2; in other words the slope of the line is two vertical to one horizontal. This means that the vertical reach or distance of any point in the line, as *E*, above any other point in that line, as for instance *C*, is twice the horizontal distance of the same point *E* from the point *C*, but to double the logarithm of a number gives the logarithm of the square of that number, hence the ordinate opposite any point in the line indicates the square of the value attaching to that point. In this case then, the loss of head varies as the square of the velocity.

Let us take another case of a 24-inch pipe line and assume that the loss of head per 1000 feet, at velocity of flow of 2 feet per second, amounts to 0.60 foot; and that the loss of head amounts to 0.40 foot per 1000 feet when the flow has a velocity of 1.6 foot per second, while at velocity of 1 foot the loss of head is 0.18 foot per 1000 feet. If we plot a line through the points indicating these conditions, upon Diagram C, it will be found that the natural tangent of the angle which this new line would make with the horizontal lines upon the diagram is 1.73, indicating that the loss of head, in this case, varies as the 1.73 power of the velocity, instead of as the square, as in the first case.

When the velocity equals 1 foot per second, it is evident that $H_f = m$. In the first case assumed, m equals 0.155 foot and in the second case its value is 0.20. In this way the

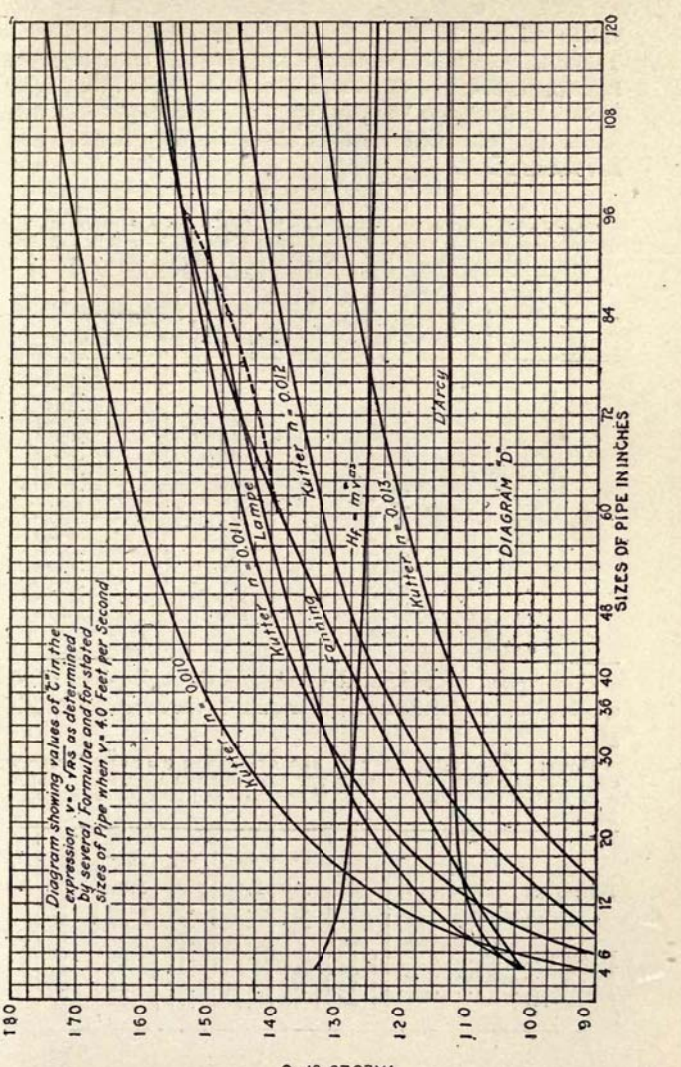


Diagram showing values of "C" in the expression "v = c√rs" as determined by several formulae and for stated sizes of Pipe when V = 4.0 feet per second
Kutter n = 0.010
Kutter n = 0.011
Lampe
Kutter n = 0.012
Fanning
Hf = myn
Kutter n = 0.013
D'Arcy
DIAGRAM "D"
VALUES OF "C"
SIZES OF PIPE IN INCHES
180
170
160
150
140
130
120
110
100
90
4
6
12
20
30
36
40
48
60
72
84
96
108
120

values of m, in the expression $H_f = mv^{1.73}$, as given in Table 3, have been determined by plotting on a large-scale logarithmic diagram, the results of certain recorded tests of flow in various-sized pipe lines, and upon the values of m thus determined the calculated amounts of flow in the extended tables have been based.

TABLE 3

These values were obtained by plotting upon a large-scale logarithmic diagram a straight line passing through points indicating values of intercepts for 14", 54" and 72" pipe, as above stated and reading values of intercepts for other sizes of pipe.

Values of m in expression $H_f = mv^{1.73}$.

Diameter.	Value of m.	Diameter.	Value of m.
4	0.980	38	0.114
6	.671	40	.109
8	.517	42	.104
10	.413	44	.0991
12	.348	46	.0954
14	.300	48	.0917
16	.263	54	.0820
18	.236	60	.0740
20	.212	66	.0671
22	.194	72	.0620
24	.178	78	.0575
26	.165	84	.0534
28	.153	90	.0498
30	.144	96	.0470
32	.134	108	.0417
34	.127	120	.0378
36	.120		

Comparison of estimated discharges through pipes of sizes specified and as determined by formulæ of the several authorities given.

NOTE: The value of c in the expression $v = c\sqrt{rs}$, is assumed constant for each size of pipe and not affected by slope: Value of c in Kutter formulæ $N = .010$, is assumed as unity for basis of comparison.

		4	12	24	48	72	96	120
Kutter.....	$N = .010$	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	$N = .011$	.87	.89	.89	.90	.90	.90	.90
	$N = .012$	.77	.79	.80	.82	.82	.83	.83
	$N = .013$	.69	.71	.73	.74	.75	.76	.76
D'Arcy.....	.....	1.15	.91	.81	.73	.69	.66	.64
Lampe.....	.....	1.09	.97	.94	.91	.91	.91	.93
Fanning....	.....	1.12	.90	.85	.86	.87	.90	.99
$H_f = mv^{1.73}$..	.....	1.46	1.10	.95	.79	.78	.75	.74

TABULATED FLOW DATA

In the following extended tables

K refers to Kutter.
D refers to D'Arcy.
L refers to Lampe.
F refers to Fanning.
c refers to c in Chezy Formula
S refers to exponential formula, $H_f = mv^{1.73}$.

The Kutter formula, with $n = 0.010$, is applicable to flow in new wood-stave pipe.

For clean cast-iron pipe, a very common value assumed for n is 0.012.

The formulæ by D'Arcy, Lampe and Fanning and the expression $H_f = mv^{1.73}$ are generally accepted as applying to clean cast-iron pipe.

A "birds-eye view" of the situation can be obtained by inspection of Diagram D, upon which are graphically shown values of c, in the expression $v = c\sqrt{rs}$, as determined by the several formulæ under consideration and for stated sizes of pipe, when $v = 4.0$ feet per second.

Results determined by the Fanning formula for pipes between 60 and 96 inches in diameter do not appear to be consistent with the results obtained from the formula for sizes below 60 inches in diameter, as shown upon Diagram D.

It is believed that the values of c for 96-inch pipe by the Fanning formula can stand inspection, but the values for 66, 72, 78, 84 and 90-inch pipe are too small, as will be evident by inspecting the Fanning curve on Diagram D.

It is well known that, under ordinary conditions, the carrying capacity of iron pipe begins to decrease as soon as laid and put into service; just how much this decrease will amount to in stated periods of time is entirely dependent upon local conditions.

Some writers have undertaken to tabulate percentages of normal or original carrying capacity that pipes will discharge after stated periods of service. To do this seems to the author akin to buying eye-glasses from a curbstone vendor—it would

be a miracle if such glasses chanced to fit the purchaser's eyes. Last year (1914) the author had occasion to test the carrying capacities of two 36-inch parallel cast-iron pipe lines—which were laid at the same time (1889), within a few feet of each other, practically in the same trench of same length. With these conditions being the same with both pipe lines, it might be assumed that the two lines would have the same resistance head, and yet, as a matter of fact, one line offered twice as much resistance as did the other.

Thinking there might be some obstruction causing the larger resistance head, the pipe was uncovered at points 100 feet apart and corporation cocks inserted, to which tested gauges were attached. The resulting pressures, when plotted and adjusted to a common datum of levels, demonstrated that the resistance was uniform throughout the length of the pipe. At that time the two lines of pipe were delivering water from the same pump and into the same basin.

The explanation seems to lie in the fact that the pipe line offering the least resistance had previously been used to convey raw water from the Missouri River, which carries in suspension considerable sand, and this has contributed in keeping the interior walls of the pipe well scoured and hence free from tuberculation, whereas the other line has been used in carrying water that had been settled and also treated and hence was clear and had no such scouring influence.

Every pipe line will have to be judged in the light of local conditions. To undertake to prescribe hard and fast values expressing the decrease in carrying capacities, because of age, is, the author believes, a dangerous procedure and is more than likely liable to mislead. Better let each case be decided independent of others.

The following table is appended, as a mere suggestion of the effects of age upon cast-iron pipe. The data contained in the table are based upon results of measurements of flow and pressures in the pipe-distribution system of a Western city, using filtered mountain water, containing about 30 grains of mineral salts per gallon.

TABULATED VALUES OF PERCENTAGE OF CARRYING CAPACITIES OF OLD PIPE TO NEW CLEAN CAST-IRON PIPE

YEARS PIPE HAS BEEN IN SERVICE

Diameter Inches.	1	2	3	4	5	6	7	8	9
6	80	70	61	58	54	52	50	49	47
8	84	75	70	64	61	58	56	54	52
10	88	80	74	70	66	64	62	59	57
12	88	84	76	74	70	68	67	65	63
14	87	84	77	75	74	71	68	67	65
16	88	85	78	76	74	72	70	68	67
20	89	85	79	77	75	74	72	70	68
24	90	86	81	79	77	75	74	72	70
30	91	86	83	81	79	77	75	74	72
36	92	87	85	83	81	79	77	75	74
48	93	89	87	85	83	81	78	77	75
60	94	91	89	87	85	83	80	78	76
72	95	93	91	89	87	84	82	80	78

YEARS PIPE HAS BEEN IN SERVICE

Diameter Inches.	10	11	12	13	14	15	20	25	30	40
6	46	45	44	43	42	41	39	36	35	34
8	51	50	49	49	48	47	44	42	41	40
10	56	56	55	55	54	53	50	48	47	46
12	62	62	61	60	59	58	56	53	52	51
14	63	63	62	61	60	59	57	54	53	52
16	65	64	63	62	61	60	58	55	54	53
20	67	65	64	63	62	61	59	56	55	54
24	68	66	65	64	63	62	60	57	56	55
30	70	68	67	66	65	64	62	58	57	56
36	72	70	69	68	66	65	63	60	59	58
48	74	72	70	69	68	66	64	61	60	59
60	75	73	72	70	69	68	65	62	61	60
72	76	74	73	71	70	69	66	63	62	61

TABLES

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.2120	0.019	8	0.012	73.452
D		.2936	.026	11	.017	101.710
L		.2180	.019	9	.012	75.643
F		.2673	.023	11	.015	92.606
S		.2673	.023	10	.015	92.604
K	0.12	0.2449	0.021	10	0.014	77.438
D		.3216	.028	13	.018	101.710
L		.2420	.021	10	.014	76.406
F		.2928	.026	12	.017	92.606
S		.2970	.026	12	.017	93.929
K	0.15	0.2762	0.024	11	0.016	78.134
D		.3596	.031	14	.020	101.710
L		.2730	.024	11	.015	77.350
F		.3283	.029	13	.019	92.854
S		.3379	.029	13	.019	95.581
K	0.20	0.3324	0.029	13	0.019	80.878
D		.4152	.036	16	.023	101.710
L		.3210	.028	13	.018	78.583
F		.3801	.033	15	.021	92.890
S		.3991	.035	16	.023	97.751
K	0.30	0.4196	0.037	16	0.024	83.915
D		.5085	.044	20	.029	101.710
L		.4020	.035	16	.023	80.355
F		.4671	.041	18	.026	93.420
S		.5045	.044	20	.028	100.900
K	0.40	0.4940	0.043	19	0.028	85.566
D		.5872	.051	23	.033	101.710
L		.4710	.041	19	.027	81.636
F		.5405	.047	21	.031	93.610
S		.5957	.052	23	.034	103.180
K	0.50	0.5591	0.049	22	0.032	86.623
D		.6565	.057	26	.037	101.710
L		.5330	.047	21	.030	82.646
F		.6062	.053	24	.034	93.910
S		.6777	.059	27	.038	104.990
K	0.60	0.6176	0.054	24	0.035	87.345
D		.7192	.063	28	.041	101.710
L		.5900	.052	23	.033	83.478
F		.6651	.058	26	.038	94.061
S		.7531	.066	29	.042	106.500
K	0.70	0.6712	0.059	26	0.038	87.874
D		.7768	.068	31	.044	101.710
L		.6430	.056	25	.036	84.188
F		.7199	.063	28	.041	94.254
S		.8233	.072	32	.046	107.790

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	0.7224	0.063	28	0.041	88.472
D		.8304	.072	33	.047	101.710
L		.6920	.060	27	.039	84.811
F		.7717	.067	30	.044	94.517
S		.8893	.078	35	.050	108.920
K	0.90	0.7673	0.067	30	0.043	88.597
D		.8808	.077	35	.050	101.710
L		.7390	.065	29	.042	85.359
F		.8191	.072	32	.046	94.582
S		.9520	.083	37	.054	109.920
K	1.0	0.8110	0.071	32	0.046	88.841
D		.9285	.081	36	.052	101.710
L		.7840	.068	31	.044	85.856
F		.8652	.076	34	.049	94.781
S		1.0117	.088	40	.057	110.830
K	1.5	1.0019	0.088	39	0.057	89.603
D		1.1371	.099	45	.064	101.710
L		0.9820	.086	39	.055	87.793
F		1.0671	.093	42	.060	95.449
S		.2790	.112	50	.072	114.390
K	2.0	1.1620	0.102	46	0.066	90.010
D		.3130	.115	52	.074	101.710
L		.1510	.100	45	.065	89.193
F		.2375	.108	49	.070	95.856
S		.5103	.132	59	.085	116.990
K	3.0	1.4295	0.125	56	0.081	90.413
D		.6081	.140	63	.091	101.710
L		.4420	.126	57	.081	91.205
F		.5244	.133	60	.086	96.410
S		.9092	.167	75	.108	120.750
K	4.0	1.6544	0.144	65	0.093	90.615
D		.8569	.162	73	.105	101.710
L		.6920	.148	66	.095	92.657
F		.7692	.154	69	.100	96.902
S		2.2547	.197	88	.127	123.490
K	5.0	1.8501	0.162	73	0.104	90.634
D		2.0761	.181	81	.117	101.710
L		1.9150	.167	75	.108	93.803
F		.9881	.173	78	.112	97.398
S		2.5650	.224	100	.145	125.660
K	6.0	2.0307	0.177	80	0.115	90.818
D		.2742	.198	89	.128	101.710
L		.1190	.185	83	.120	94.748
F		.1892	.191	86	.124	97.906
S		.8501	.249	112	.161	127.460

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	2.1949	0.192	86	0.124	90.877
D		.4565	.214	96	.139	101.710
L		.3080	.202	90	.130	95.554
F		.3771	.207	93	.134	98.422
S		3.1086	.272	122	.176	129.000
K	8.0	2.2941	0.200	90	0.130	90.919
D		.6261	.229	103	.148	101.710
L		.4850	.217	97	.140	96.261
F		.5547	.223	100	.144	98.945
S		3.3658	.294	132	.190	130.350
K	9.0	2.4909	0.218	98	0.141	90.956
D		.7854	.243	109	.157	101.710
L		.6530	.232	104	.150	96.883
F		.7180	.237	107	.153	99.248
S		3.6029	.314	141	.203	131.560
K	10.0	2.6265	0.230	103	0.148	90.983
D		.9360	.256	115	.166	101.710
L		.8130	.246	111	.159	97.447
F		.8694	.251	112	.162	99.399
S		3.8291	.334	150	.216	132.640
K	11.0	2.7553	0.241	108	0.156	91.006
D		3.0793	.269	121	.174	101.710
L		2.9660	.259	116	.167	97.960
F		3.0187	.263	118	.170	99.706
S		4.0459	.353	158	.228	133.630
K	12.0	2.8785	0.251	113	0.163	91.025
D		3.2163	.281	126	.181	101.710
L		.1130	.272	122	.176	98.431
F		.1579	.276	124	.178	99.860
S		4.2547	.371	167	.240	134.540
K	13.0	2.9971	0.262	118	0.169	91.037
D		3.3476	.292	131	.189	101.710
L		.2540	.284	128	.184	98.864
F		.2945	.288	129	.186	100.090
S		4.4564	.389	175	.251	135.390
K	14.0	3.1095	0.272	122	0.175	91.040
D		.4740	.303	136	.196	101.710
L		.3910	.296	133	.191	99.268
F		.4242	.299	134	.193	100.250
S		4.6513	.406	182	.262	136.180
K	15.0	3.2195	0.282	126	0.182	91.063
D		.5959	.314	141	.203	101.710
L		.5230	.307	138	.199	99.646
F		.5526	.310	139	.200	100.490
S		4.8405	.422	190	.273	136.910

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	3.3257	0.290	130	0.188	91.078
D		.7138	.324	145	.210	101.710
L		.6520	.319	143	.206	100.000
F		.6750	.321	144	.207	100.640
S		5.0245	.438	197	.283	137.600
K	17.0	3.4283	0.299	134	0.194	91.084
D		.8281	.334	150	.216	101.710
L		.7760	.329	148	.213	100.330
F		.7941	.331	149	.214	100.800
S		5.2037	.454	204	.294	138.250
K	18.0	3.5280	0.308	138	0.199	91.092
D		.9391	.344	155	.222	101.710
L		.8980	.340	153	.220	100.650
F		.9093	.341	153	.221	100.940
S		5.3785	.469	211	.303	138.870
K	19.0	3.6249	0.317	142	0.205	91.101
D		4.0470	.353	159	.228	101.710
L		.0170	.351	157	.227	100.950
F		.0205	.351	157	.227	101.040
S		5.5492	.484	217	.313	139.460
K	20.0	3.7194	0.325	146	0.210	91.107
D		4.1522	.362	163	.234	101.710
L		.1330	.361	162	.233	101.230
F		.1283	.360	162	.233	101.120
S		5.7162	.499	224	.322	140.020
K	21.0	3.8116	0.332	149	0.215	91.113
D		4.2547	.371	167	.240	101.710
L		.2460	.370	166	.240	101.510
F		.2336	.369	166	.239	101.200
S		5.8796	.513	230	.332	140.550
K	22.0	3.9014	0.341	153	0.220	91.117
D		4.3548	.380	171	.246	101.710
L		.3570	.381	171	.246	101.770
F		.3367	.379	170	.245	101.280
S		6.0391	.527	237	.341	141.040
K	23.0	3.9894	0.348	156	0.225	91.123
D		4.4527	.389	175	.251	101.710
L		.4660	.389	175	.252	102.020
F		.4412	.388	174	.251	101.440
S		6.1971	.541	243	.350	141.550
K	24.0	4.0753	0.356	160	0.230	91.128
D		.5484	.397	178	.257	101.710
L		.5730	.399	179	.258	102.260
F		.5404	.396	178	.256	101.520
S		6.3516	.554	249	.358	142.020

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	4.159	0.363	163	0.235	91.130
D		.642	.405	182	.262	101.710
L		.678	.408	183	.264	102.480
F		.641	.405	182	.262	101.690
S		6.503	.568	255	.367	142.480
K	30.0	4.558	0.398	179	0.257	91.149
D		5.085	.444	199	.287	101.710
L		.176	.452	203	.292	103.520
F		.109	.446	200	.288	102.180
S		7.226	.631	283	.408	144.520
K	40.0	5.264	0.460	207	0.297	91.170
D		.872	.512	230	.331	101.710
L		6.072	.530	238	.343	105.170
F		5.958	.520	233	.336	103.190
S		8.533	.745	334	.481	147.800
K	50.0	5.886	0.514	231	0.332	91.182
D		6.565	.573	257	.370	101.710
L		.872	.600	269	.388	106.470
F		.700	.584	262	.378	103.800
S		9.708	.847	380	.548	150.390
K	60.0	6.448	0.563	253	0.364	91.189
D		7.192	.628	282	.406	101.710
L		.604	.664	297	.429	107.540
F		.371	.643	289	.416	104.240
S		10.787	.941	426	.608	152.550
K	70.0	6.965	0.608	273	0.393	91.195
D		7.768	.678	305	.438	101.710
L		8.283	.723	325	.467	108.460
F		7.995	.698	313	.451	104.680
S		11.792	1.029	462	.665	154.400
K	80.0	7.447	0.650	292	0.420	91.199
D		8.304	.725	326	.468	101.710
L		.921	.779	351	.504	109.260
F		.574	.749	336	.484	105.240
S		12.739	1.112	499	.718	156.010
K	90.0	7.899	0.690	310	0.446	91.206
D		8.808	.769	345	.497	101.710
L		9.523	.831	373	.537	109.970
F		.144	.798	358	.517	105.580
S		13.636	1.190	534	.769	157.450
K	100.0	8.326	0.727	326	0.470	91.206
D		9.285	.810	364	.524	101.710
L		10.097	.881	396	.570	110.600
F		9.663	.843	379	.545	105.850
S		14.492	1.265	568	.817	158.750

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	150.0	10.198	0.890	399	0.575	91.212
D		11.371	.992	445	.642	101.710
L		12.645	1.104	495	.713	113.100
F		11.982	.046	469	.676	107.170
S		18.320	.599	718	1.033	163.850
K	200.0	11.777	1.028	461	0.664	91.220
D		13.130	.146	515	.741	101.710
L		14.834	.295	581	.837	114.900
F		13.911	.214	545	.785	107.750
K	250.0	13.168	1.149	516	0.743	91.228
D		14.680	.281	575	.828	101.710
L		16.789	.465	657	.947	116.320
F		15.580	.360	610	.879	107.940
K	300.0	14.425	1.259	565	0.814	91.228
D		16.081	.403	630	.907	101.710
K	350.0	15.580	1.360	610	0.879	91.228

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.2984	0.059	26	0.038	84.406
D		.3720	.073	33	.047	105.290
L		.2900	.057	26	.037	81.833
F		.3290	.065	29	.042	92.980
S		.3328	.065	29	.042	94.115
K	0.12	0.3358	0.066	30	0.043	86.690
D		.4080	.080	36	.052	105.290
L		.3200	.063	28	.041	82.660
F		.3610	.071	32	.046	93.110
S		.3697	.073	33	.047	95.464
K	0.15	0.3863	0.076	34	0.049	89.207
D		.4560	.090	40	.058	105.290
L		.3630	.071	32	.046	83.680
F		.4040	.079	36	.051	93.290
S		.4206	.083	37	.053	97.143
K	0.20	0.4598	0.090	41	0.058	91.952
D		.5270	.103	46	.067	105.290
L		.4250	.084	38	.054	85.010
F		.4680	.092	41	.059	93.610
S		.4968	.098	44	.063	99.351
K	0.30	0.5821	0.115	51	0.074	95.048
D		.6450	.127	57	.082	105.290
L		.5330	.105	47	.068	86.930
F		.5830	.114	51	.074	95.200
S		.6279	.123	55	.080	102.540
K	0.40	0.6839	0.134	60	0.087	96.712
D		.7440	.146	66	.095	105.290
L		.6250	.123	55	.079	88.320
F		.6800	.133	60	.086	96.20
S		.7415	.146	65	.094	104.86
K	0.50	0.7728	0.152	68	0.098	97.755
D		.8330	.164	73	.106	105.290
L		.7070	.139	62	.090	89.41
F		.7630	.150	67	.097	96.48
S		.8436	.166	74	.107	105.24
K	0.60	0.8528	0.172	75	0.108	98.472
D		.9120	.179	80	.116	105.290
L		.7820	.154	69	.099	90.29
F		.8380	.165	74	.106	96.76
S		.9374	.184	83	.119	108.24
K	0.70	0.9260	0.182	82	0.118	98.99
D		.9850	.193	87	.125	105.29
L		.8520	.171	75	.108	91.08
F		.9064	.178	80	.115	96.90
S		1.0270	.201	90	.130	109.55

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	0.994	0.195	88	0.126	99.39
D		1.053	.207	93	.134	105.29
L		0.918	.180	81	.116	91.75
F		.972	.191	86	.123	97.19
S		1.107	.217	98	.140	110.70
K	0.90	1.058	0.208	93	0.134	99.70
D		.117	.219	98	.142	105.29
L		0.979	.192	86	.124	92.34
F		1.032	.203	91	.131	97.33
S		.185	.233	104	.150	111.72
K	1.0	1.118	0.220	98	0.142	99.95
D		.172	.231	104	.149	105.29
L		.038	.204	92	.132	92.88
F		.091	.215	96	.139	97.62
S		.259	.247	111	.160	112.64
K	1.5	1.379	0.271	122	0.175	100.72
D		.442	.283	127	.183	105.29
L		.301	.255	115	.165	94.98
F		.348	.265	119	.171	98.42
S		.592	.313	140	.202	116.26
K	2.0	1.598	0.314	141	0.203	101.04
D		.665	.327	147	.211	105.29
L		.526	.299	135	.194	96.49
F		.560	.306	138	.198	98.64
S		.883	.370	166	.239	119.06
K	3.0	1.966	0.386	173	0.249	101.51
D		2.039	.400	180	.259	105.29
L		1.911	.375	168	.243	98.67
F		.926	.378	170	.245	99.48
S		2.377	.467	209	.302	122.72
K	4.0	2.274	0.447	200	0.289	101.70
D		.355	.462	208	.299	105.29
L		.242	.430	193	.284	100.24
F		.242	.440	198	.284	100.24
S		.807	.551	247	.356	125.51
K	5.0	2.546	0.500	224	0.323	101.83
D		.632	.517	232	.334	105.29
L		.537	.498	224	.322	101.48
F		.520	.495	222	.320	100.80
S		3.193	.627	281	.405	127.72
K	6.0	2.791	0.548	246	0.354	101.91
D		.884	.566	254	.366	105.29
L		.808	.552	248	.356	102.50
F		.780	.546	245	.353	101.53
S		3.548	.697	313	.450	129.55

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	3.016	0.592	266	0.383	101.96
D		.115	.612	275	.395	105.29
L		.058	.601	270	.388	103.37
F		.005	.590	264	.381	101.61
S		.879	.762	342	.492	131.11
K	8.0	3.226	0.633	284	0.410	102.01
D		.330	.654	294	.423	105.29
L		.293	.647	290	.418	104.14
F		.226	.633	284	.409	102.02
S		4.189	.823	369	.532	132.47
K	9.0	3.423	0.672	302	0.434	102.04
D		.532	.694	311	.448	105.29
L		.516	.691	310	.446	104.81
F		.438	.674	302	.435	102.27
S		4.485	.881	395	.569	133.71
K	10.0	3.609	0.709	318	0.458	102.07
D		.723	.731	328	.472	105.29
L		.727	.732	329	.473	105.42
F		.625	.712	319	.460	102.52
S		4.766	.936	420	.605	134.81
K	11.0	3.786	0.744	334	0.480	102.10
D		.904	.767	344	.496	105.29
L		.930	.772	346	.500	105.95
F		.811	.749	336	.484	102.77
S		5.036	.989	444	.639	135.82
K	12.0	3.955	0.777	349	0.502	102.11
D		4.078	.801	359	.518	105.29
L		.124	.810	364	.523	106.49
F		3.987	.783	351	.506	102.94
S		5.296	1.040	467	.672	136.74
K	13.0	4.117	0.809	363	0.523	102.13
D		.245	.833	374	.539	105.29
L		.312	.847	380	.547	106.96
F		.160	.817	367	.528	103.19
S		5.547	1.089	489	.704	137.60
K	14.0	4.273	0.839	376	0.543	102.14
D		.405	.865	389	.559	105.29
L		.493	.882	396	.570	107.39
F		.328	.849	381	.549	103.45
S		5.790	1.137	510	.735	138.40
K	15.0	4.423	0.868	390	0.561	102.15
D		.559	.895	402	.579	105.29
L		.668	.917	412	.592	107.80
F		.491	.882	396	.570	103.71
S		6.025	1.183	531	.765	139.15

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	4.569	0.897	403	0.580	102.16
D		.709	.925	415	.598	105.29
L		.838	.950	426	.614	108.18
F		.646	.913	410	.590	103.89
S		6.254	1.228	551	.794	139.85
K	17.0	4.710	0.925	415	0.598	102.17
D		.854	.953	428	.616	105.29
L		5.004	.983	441	.635	108.55
F		4.793	.941	422	.608	103.97
S		6.477	1.272	571	.822	140.51
K	18.0	4.847	0.952	427	0.615	102.17
D		.994	.981	440	.634	105.29
L		5.165	1.014	455	.655	108.89
F		4.936	0.969	435	.626	104.06
S		6.695	1.315	590	.850	141.14
K	19.0	4.980	0.978	439	0.632	102.18
D		5.131	1.008	452	.651	105.29
L		.322	.045	469	.675	109.21
F		.076	0.997	447	.644	104.15
S		6.907	1.356	609	.876	141.72
K	20.0	5.110	1.006	451	0.650	102.19
D		.265	.034	464	.668	105.29
L		.476	.075	483	.695	109.52
F		.212	.023	460	.661	104.24
S		7.115	.397	627	.903	142.30
K	21.0	5.236	1.028	462	0.665	102.20
D		.395	.059	476	.685	105.29
L		.626	.105	496	.714	109.81
F		.345	.050	471	.678	104.33
S		7.319	.437	645	.929	142.85
K	22.0	5.360	1.052	473	0.680	102.20
D		.522	.084	487	.701	105.29
L		.773	.134	509	.733	110.09
F		.476	.075	483	.695	104.41
S		7.538	.480	664	.957	143.75
K	23.0	5.480	1.076	483	0.695	102.21
D		.646	.109	497	.717	105.29
L		.918	.162	522	.751	110.36
F		.603	.100	494	.711	104.50
S		7.714	.515	680	.979	143.87
K	24.0	5.598	1.099	494	0.711	102.21
D		.767	.132	509	.732	105.29
L		6.059	.190	534	.769	110.62
F		5.733	.126	505	.728	104.68
S		7.906	.552	.697	1.003	144.35

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	5.714	1.122	504	0.725	102.22
D		.886	.156	518	.747	105.29
L		6.198	.217	546	.786	110.87
F		5.857	.150	516	.743	104.76
S		8.095	.590	713	1.027	144.81
K	30.0	6.260	1.229	552	0.795	102.23
D		.448	.266	568	.818	105.29
L		.858	.347	604	.870	111.99
F		.460	.268	569	.820	105.49
S		8.995	.766	793	1.141	146.88
K	40.0	7.231	1.420	637	0.918	102.25
D		.445	.462	656	.945	105.29
L		8.045	.580	709	1.021	113.77
F		7.531	.479	664	0.956	106.51
S		10.622	2.086	936	1.348	150.22
K	50.0	8.085	1.588	712	1.026	102.26
D		.324	.635	734	.056	105.29
L		9.106	.788	803	.156	115.31
F		8.480	.665	747	.076	107.27
S		12.084	2.373	1065	.534	152.85
K	60.0	8.857	1.739	780	1.124	102.27
D		9.119	.790	804	.157	105.29
L		10.075	.978	888	.279	116.34
F		9.366	.839	825	.189	108.14
S		13.427	2.637	1183	.704	155.04
K	70.0	9.567	1.879	843	1.214	102.28
D		.849	.934	868	.250	105.29
L		10.975	2.155	967	.393	117.33
F		.125	1.988	892	.285	108.24
S		14.679	2.882	1294	.863	156.92
K	80.0	10.228	2.008	901	1.298	102.29
D		.529	.067	928	.336	105.29
L		11.820	.321	1042	.500	118.20
F		10.864	.133	958	.379	108.63
S		15.862	3.115	1398	2.013	158.62
K	90.0	10.849	2.130	956	1.377	102.29
D		11.168	.193	984	.417	105.29
L		12.618	.478	1112	.601	118.96
F		11.554	.269	1018	.466	108.94
K	100.0	11.437	2.251	1010	1.455	102.29
D		.772	.312	1038	.494	105.29
L		13.378	.627	1179	.698	119.65
F		12.202	.396	1075	.549	109.14
K	150.0	14.008	2.750	1235	1.778	102.30
D		.418	.831	1271	.830	105.29
L		16.754	3.290	1477	2.126	122.35
F		15.057	2.956	1327	1.911	109.95
K	200.0	16.176	3.176	1426	2.053	102.30
D		.648	.269	1467	.113	105.29

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.378	0.132	59	0.085	92.65
D		.438	.153	69	.010	107.23
L		.354	.123	55	.080	86.52
F		.395	.138	62	.089	96.83
S		.387	.135	60	.087	94.76
K	0.12	0.425	0.148	66	0.096	94.94
D		.480	.167	75	.108	107.23
L		.391	.136	61	.088	87.40
F		.434	.152	68	.098	97.04
S		.430	.150	67	.097	96.11
K	0.15	0.487	0.170	76	0.110	97.45
D		.536	.187	84	.121	107.23
L		.442	.155	69	.100	88.48
F		.486	.170	76	.110	97.26
S		.489	.170	77	.110	97.80
K	0.20	0.577	0.202	90	0.131	100.19
D		.619	.216	97	.140	107.23
L		.519	.181	81	.117	89.89
F		.563	.197	88	.127	97.54
S		.578	.202	90	.130	100.02
K	0.30	0.730	0.255	114	0.165	103.22
D		.758	.265	119	.171	107.23
L		.650	.227	102	.147	91.91
F		.693	.242	109	.156	97.98
S		.730	.255	114	.165	103.23
K	0.40	0.856	0.299	134	0.194	104.86
D		.876	.306	137	.198	107.23
L		.763	.266	120	.172	93.38
F		.804	.281	126	.181	98.42
S		.862	.301	135	.195	105.58
K	0.50	0.967	0.338	152	0.218	105.87
D		.979	.342	153	.221	107.23
L		.863	.301	135	.195	94.53
F		.901	.315	141	.203	98.72
S		.981	.342	154	.221	107.44
K	0.60	1.066	0.372	167	0.241	106.57
D		.072	.374	168	.241	107.23
L		0.955	.333	150	.215	95.50
F		.991	.345	155	.224	99.10
S		1.090	.380	171	.246	108.97
K	0.70	1.157	0.404	181	0.261	107.08
D		.158	.404	181	.261	107.23
L		.040	.363	163	.235	96.30
F		.072	.375	168	.242	99.25
S		.191	.416	187	.269	110.27

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	1.241	0.433	194	0.280	107.42
D		.238	.432	194	.279	107.23
L		.120	.391	175	.253	97.01
F		.149	.401	180	.259	99.48
S		.287	.449	202	.290	111.45
K	0.90	1.320	0.461	207	0.298	107.78
D		.313	.459	206	.296	107.23
L		.196	.417	187	.270	97.64
F		.220	.426	191	.275	99.63
S		.378	.481	216	.311	112.48
K	1.00	1.394	0.487	219	0.315	108.02
D		.385	.484	215	.312	107.23
L		.268	.443	199	.286	98.20
F		.290	.450	202	.291	99.94
S		.146	.511	229	.330	113.67
K	1.50	1.720	0.600	269	0.388	108.76
D		.696	.592	266	.383	107.23
L		.588	.554	249	.358	100.42
F		.594	.557	250	.360	100.80
S		.185	.646	290	.418	117.05
K	2.0	1.992	0.696	312	0.450	109.09
D		.958	.684	307	.442	107.23
L		.863	.651	292	.420	102.02
F		.846	.645	290	.417	101.12
S		2.186	.763	342	.493	119.71
K	3.0	2.450	0.855	384	0.553	109.53
D		.398	.837	376	.541	107.23
L		.333	.814	365	.526	104.32
F		.285	.797	358	.512	102.18
S		.763	.965	433	.623	123.56
K	4.0	2.833	0.989	444	0.640	109.72
D		.769	.967	434	.625	107.23
L		.737	.956	429	.617	105.98
F		.660	.928	417	.600	103.02
S		3.263	1.139	511	.736	126.36
K	5.0	3.171	1.107	497	0.716	109.84
D		.096	.081	485	.698	107.23
L		.098	.081	486	.699	107.29
F		2.989	.043	468	.674	103.54
S		3.712	.296	582	.838	128.59
K	6.0	3.476	1.214	545	0.784	109.92
D		.391	.184	531	.765	107.23
L		.428	.197	537	.773	108.38
F		.288	.148	515	.742	103.97
S		4.125	.440	646	.931	130.43

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	3.765	1.314	590	0.849	109.95
D		.663	.279	574	.826	107.23
L		.734	.303	585	.842	109.30
F		.561	.243	558	.803	104.24
S		4.509	.574	706	1.017	132.00
K	8.0	4.017	1.402	630	0.907	110.01
D		3.916	.367	614	.884	107.23
L		4.021	.404	630	.907	110.11
F		3.819	.333	598	.862	104.59
S		4.871	.700	763	1.099	133.39
K	9.0	4.263	1.488	668	0.962	110.05
D		.154	.450	651	.937	107.23
L		.292	.498	672	.968	110.82
F		.058	.417	636	.916	104.76
S		5.214	.820	817	1.176	134.62
K	10.0	4.494	1.569	704	1.014	110.07
D		.378	.528	686	0.988	107.23
L		.551	.585	713	1.027	111.46
F		.285	.496	671	0.967	104.95
S		5.542	.935	868	1.250	135.73
K	11.0	4.714	1.646	739	1.064	110.10
D		.592	.603	719	.036	107.23
L		.798	.675	752	.083	112.05
F		.506	.573	706	.016	105.22
S		5.856	2.044	917	.321	136.74
K	12.0	4.923	1.719	772	1.111	110.12
D		.796	.674	751	.082	107.23
L		5.036	.799	808	.163	112.59
F		4.728	.650	741	.067	105.70
S		6.158	2.149	965	.389	137.67
K	13.0	5.127	1.790	822	1.184	110.13
D		4.992	.743	782	.126	107.23
L		5.264	.838	825	.188	113.07
F		4.932	.722	773	.113	105.95
S		6.449	2.251	1010	.455	138.53
K	14.0	5.321	1.857	833	1.228	110.14
D		.180	.808	813	.171	107.23
L		.485	.915	860	.238	113.54
F		.132	.791	804	.158	106.23
S		6.732	2.350	1055	.519	139.34
K	15.0	5.508	1.923	863	1.243	110.15
D		.362	.872	840	.210	107.23
L		.699	.989	893	.286	113.98
F		.317	.856	833	.199	106.32
S		7.006	2.445	1098	.581	140.10

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	5.689	1.986	892	1.284	110.16
D		.538	.933	868	.249	107.23
L		.907	2.062	926	.333	114.38
F		.496	1.918	861	.240	106.42
S		7.272	2.538	1139	.641	140.80
K	17.0	5.865	2.047	919	1.323	110.17
D		.709	1.993	894	.288	107.23
L		6.110	2.133	957	.378	114.77
F		5.675	1.981	889	.280	106.60
S		7.531	2.629	1180	.699	141.47
K	18.0	6.035	2.107	945	1.362	110.17
D		5.874	.050	920	.325	107.23
L		6.306	.201	988	.423	115.13
F		5.850	.042	917	.320	106.79
S		7.763	.710	1216	.751	141.72
K	19.0	6.201	2.165	972	1.399	110.19
D		.035	.196	945	.362	107.23
L		.499	.268	1018	.466	115.47
F		.021	.102	943	.358	106.98
S		8.031	.803	1258	.812	142.70
K	20.0	6.363	2.221	997	1.436	110.19
D		.192	.161	970	.397	107.23
L		.686	.334	1048	.508	115.80
F		.188	.160	969	.396	107.17
S		8.273	.888	1296	.866	143.28
K	21.0	6.520	2.276	1022	1.471	110.20
D		.345	.215	994	.431	107.23
L		.870	.398	1076	.550	116.11
F		.352	.217	995	.433	107.36
S		8.521	.974	1335	.922	144.01
K	22.0	6.674	2.330	1046	1.506	110.20
D		.494	.267	1017	.465	107.23
L		7.049	.461	1104	.590	116.40
F		6.508	.272	1020	.468	107.46
S		8.741	3.051	1370	.972	144.34
K	23.0	6.824	2.382	1069	1.540	110.21
D		.640	.318	1040	.498	107.23
L		7.225	.522	1132	.630	116.69
F		6.660	.325	1043	.501	107.56
S		8.969	3.131	1405	2.023	144.85
K	24.0	6.971	2.433	1092	1.573	110.21
D		.783	.368	1062	.530	107.23
L		7.398	.582	1159	.669	116.96
F		6.809	.377	1067	.536	107.66
S		9.192	3.209	1440	2.074	145.33

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			$\cdot c$
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	7.115	2.484	1115	1.605	110.21
D		6.923	.417	1085	.562	107.23
L		7.568	.642	1186	.707	117.23
F		6.962	.430	1091	.570	107.84
S		9.412	3.285	1475	2.123	145.79
K	30.0	7.795	2.721	1221	1.759	110.23
D		.583	.647	1188	.711	107.23
L		8.373	.923	1312	.889	118.40
F		7.676	.679	1203	.732	108.53
S		10.458	3.651	1638	2.359	147.88
K	40.0	9.003	3.143	1411	2.031	110.25
D		8.756	.057	1372	1.976	107.23
L		9.823	.429	1539	2.216	120.30
F		8.929	.117	1399	.014	109.34
S		12.350	4.311	1935	.786	151.24
K	50.0	10.066	3.514	1577	2.271	110.26
D		9.790	.471	1534	.209	107.23
L		11.118	.881	1742	.508	121.78
F		10.057	.511	1576	.269	110.16
S		14.050	4.904	2201	3.170	153.90
K	60.0	11.027	3.849	1728	2.488	110.27
D		10.724	.744	1680	.414	107.23
L		12.302	4.294	1927	.774	123.02
F		11.058	3.860	1733	.495	110.58
S		15.611	5.449	2446	3.522	156.11
K	70.0	11.912	4.158	1866	2.687	110.27
D		.584	.044	1815	.613	107.23
L		13.401	.678	2100	3.023	124.05
F		11.991	.186	1879	2.705	111.01
K	80.0	12.736	4.446	1995	2.873	110.28
D		.383	.323	1940	.794	107.23
L		14.432	5.038	2261	3.256	124.97
F		12.855	4.488	2014	2.900	111.32
K	90.0	13.508	4.715	2116	3.048	110.28
D		.134	.585	2058	2.963	107.23
L		15.406	5.378	2414	3.476	125.78
F		13.675	4.774	2143	.085	111.65
K	100.0	14.239	4.970	2231	3.212	110.28
D		13.845	.835	2154	.124	107.23
F		14.443	5.042	2263	.259	111.86
K	150.0	17.441	6.088	2739	3.944	110.30
D		16.957	5.915	2657	.826	107.23
F		17.741	6.193	2780	4.003	112.19

For-nula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.453	0.247	111	0.160	99.24
D		.495	.270	121	.175	108.45
L		.413	.225	101	.145	90.37
F		.449	.245	110	.158	98.42
S		.441	.240	108	.155	96.52
K	0.12	0.508	0.277	124	0.179	101.51
D		.542	.296	133	.191	108.45
L		.457	.249	112	.161	91.28
F		.494	.269	120	.174	98.64
S		.489	.267	120	.173	97.90
K	0.15	0.581	0.317	142	0.205	103.98
D		.606	.331	148	.214	108.45
L		.517	.282	127	.182	92.39
F		.553	.301	135	.195	98.78
S		.557	.304	136	.196	99.62
K	0.20	0.689	0.376	169	0.243	106.72
D		.700	.382	171	.247	108.45
L		.606	.331	149	.214	93.88
F		.641	.349	157	.226	99.24
S		.658	.359	161	.232	101.89
K	0.30	0.867	0.473	212	0.306	109.63
D		.857	.468	210	.302	108.45
L		.759	.414	186	.268	96.00
F		.786	.429	193	.277	99.41
S		.831	.453	203	.293	105.16
K	0.40	1.015	0.554	249	0.358	111.22
D		0.990	.540	242	.349	108.45
L		.890	.486	218	.314	97.53
F		.913	.497	223	.322	99.94
S		.982	.535	240	.346	107.53
K	0.50	1.145	0.625	280	0.404	112.22
D		.107	.604	271	.390	108.45
L		.008	.550	247	.355	98.73
F		.023	.558	251	.361	100.25
S		.117	.609	273	.394	109.44
K	0.60	1.262	0.688	309	0.445	112.89
D		.212	.661	297	.427	108.45
L		.115	.609	273	.393	99.73
F		.125	.788	276	.397	100.64
S		.241	.677	304	.437	111.01
K	0.70	1.369	0.747	335	0.483	113.39
D		.310	.714	321	.462	108.45
L		.214	.663	298	.428	100.57
F		.218	.665	298	.429	100.88
S		.357	.740	332	.478	112.34

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	1.469	0.801	360	0.518	113.77
D		.400	.764	343	.494	108.45
L		.308	.714	320	.461	101.32
F		.306	.712	319	.461	101.20
S		.465	.799	359	.516	113.52
K	0.90	1.562	0.852	382	0.551	114.06
D		.485	.810	364	.523	108.45
L		.396	.762	341	.492	101.97
F		.389	.758	340	.490	101.44
S		.569	.856	384	.553	114.57
K	1.0	1.650	0.900	404	0.581	114.30
D		.565	.854	383	.552	108.45
L		.480	.808	363	.522	102.57
F		.466	.800	359	.517	101.58
S		.667	.909	408	.588	115.49
K	1.5	2.033	1.109	498	0.717	115.02
D		1.935	.046	469	.676	108.45
L		.854	.011	454	.654	104.88
F		.809	0.987	443	.638	102.35
S		2.108	1.150	516	.743	119.23
K	2.0	2.354	1.284	576	0.830	115.33
D		.214	.207	542	.780	108.45
L		.175	.186	533	.767	106.55
F		.105	.148	515	.742	103.11
S		.489	.358	609	.877	121.94
K	3.0	2.894	1.578	708	1.020	115.75
D		.711	.479	664	0.956	108.45
L		.724	.486	666	.960	108.96
F		.606	.421	638	.919	104.23
S		3.105	.693	760	1.094	124.19
K	4.0	3.347	1.825	819	1.180	115.94
D		.130	.707	766	.104	108.45
L		.195	.743	782	.126	110.69
F		.029	.652	742	.068	104.95
S		.716	2.027	910	.310	128.72
K	5.0	3.745	2.043	917	1.320	116.05
D		.500	1.909	857	.234	108.45
L		.616	.973	886	.275	112.06
F		.410	.860	835	.202	105.67
S		4.227	2.305	1035	.490	130.98
K	6.0	4.106	2.239	1005	1.451	116.13
D		3.834	.091	939	.351	108.45
L		4.001	.182	980	.411	113.19
F		3.755	.051	919	.324	106.23
S		4.697	.562	1150	.656	132.85

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			C
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	4.438	2.420	1086	1.564	116.18
D		.141	.259	1014	.460	108.45
L		.359	.377	1067	.537	114.15
F		.063	.216	995	.432	106.42
S		5.134	.800	1257	.810	134.46
K	8.0	4.744	2.588	1161	1.672	116.22
D		.427	.415	1084	.561	108.45
L		.694	.560	1149	.655	115.00
F		.359	.378	1067	.537	106.79
S		5.567	3.037	1363	.963	136.38
K	9.0	5.034	2.745	1232	1.774	116.26
D		4.696	.561	1150	.655	108.45
L		5.011	.733	1227	.767	115.74
F		4.632	.526	1134	.633	106.98
S		5.937	3.238	1453	2.093	137.12
K	10.0	5.307	2.894	1299	1.871	116.28
D		4.950	.700	1212	.745	108.45
L		5.313	.898	1301	.873	116.42
F		4.896	.670	1199	.726	107.27
S		6.310	3.442	1545	2.224	138.26
K	11.0	5.567	3.036	1363	1.962	116.30
D		.191	2.831	1271	.830	108.45
L		.602	3.055	1371	.975	117.03
F		.144	2.805	1259	.813	107.45
S		6.667	3.637	1632	2.350	139.29
K	12.0	5.815	3.172	1424	2.050	116.32
D		.422	2.957	1327	1.911	108.45
L		.878	3.207	1439	2.072	117.59
F		.387	2.938	1319	1.900	107.75
S		7.011	3.824	1716	2.472	140.23
K	13.0	6.054	3.309	1482	2.134	116.33
D		5.643	.078	1382	1.989	108.45
L		6.146	.352	1505	2.167	118.11
F		5.617	.064	1375	1.980	107.94
S		7.343	4.005	1798	2.589	141.12
K	14.0	6.283	3.427	1538	2.215	116.35
D		5.856	.194	1434	.064	108.45
L		6.404	.493	1568	.258	118.59
F		5.852	.192	1433	.063	108.24
S		7.665	4.181	1876	.702	141.93
K	15.0	6.504	3.550	1592	2.293	116.36
D		.062	.306	1484	.137	108.45
L		.654	.629	1629	.346	119.04
F		.056	.303	1482	.135	108.34
S		7.976	4.351	1953	.812	142.70

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	6.718	3.664	1645	2.368	116.37
D		.261	.415	1533	.207	108.45
L		.897	.762	1688	.431	119.46
F		.266	.418	1534	.209	108.53
S		8.280	4.516	2027	.919	143.42
K	17.0	6.925	3.777	1695	2.441	116.38
D		.453	.520	1580	.275	108.45
L		7.133	.890	1746	.514	119.86
F		6.468	.528	1584	.280	108.70
S		8.575	4.677	2099	3.023	144.10
K	18.0	7.126	3.887	1744	2.512	116.38
D		6.641	.622	1629	.346	108.45
L		7.363	4.016	1802	.595	120.24
F		6.664	3.635	1631	.349	108.84
S		8.863	4.834	2170	3.124	144.74
K	19.0	7.322	3.993	1792	2.581	116.39
D		6.822	.721	1670	.405	108.45
L		7.587	4.138	1857	.674	120.60
F		6.853	3.738	1678	.416	108.93
S		9.144	4.988	2239	3.224	145.36
K	20.0	7.512	4.097	1839	2.648	116.39
D		7.000	3.818	1714	.467	108.45
L		7.806	4.257	1911	.752	120.94
F		.044	3.842	1724	.483	109.14
S		9.420	5.138	2306	3.321	145.94
K	21.0	7.698	4.199	1885	2.714	116.40
D		.173	3.912	1756	.528	108.45
L		8.020	4.374	1963	.827	121.26
F		7.225	3.941	1769	.547	109.24
S		9.689	5.285	2372	3.416	146.49
K	22.0	7.880	4.298	1929	2.778	116.40
D		.341	.004	1797	.588	108.45
L		8.230	.489	2015	.901	121.27
F		7.409	.041	1814	.612	109.44
S		9.953	5.429	2437	3.509	147.03
K	23.0	8.057	4.395	1972	2.840	116.40
D		7.506	.094	1838	.646	108.45
L		8.436	.601	2065	.973	121.87
F		7.589	.139	1858	.675	109.65
S		10.212	5.570	2500	3.600	147.54
K	24.0	8.231	4.489	2015	2.901	116.41
D		7.668	.182	1877	.703	108.45
L		8.637	.711	2114	3.045	122.16
F		7.760	.229	1900	2.735	109.75
S		10.466	5.709	2562	3.690	148.03

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	8.401	4.582	2057	2.961	116.42
D		7.826	.268	1916	.759	108.45
L		8.835	.819	2163	3.114	122.43
F		7.935	.328	1942	2.797	109.96
S		10.716	5.845	2623	3.778	148.50
K	30.0	9.204	5.020	2253	3.244	116.43
D		8.573	4.676	2099	.022	108.45
L		9.775	5.332	2393	.446	123.66
F		8.733	4.763	2138	.079	110.48
S		11.907	6.495	2915	4.198	150.63
K	40.0	10.630	5.798	2602	3.747	116.45
D		9.899	.399	2423	.490	108.45
L		11.468	6.255	2807	4.043	125.64
F		10.201	5.564	2497	3.596	111.76
S		14.061	7.669	3442	4.957	154.05
K	50.0	11.885	6.482	2910	4.190	116.46
D		11.068	.036	2709	3.901	108.45
L		12.980	7.080	3178	4.576	127.19
F		11.449	6.245	2803	.036	112.19
S		15.997	8.725	3916	5.639	156.76
K	60.0	13.020	7.101	3187	4.590	116.47
D		12.124	6.613	2968	.274	108.45
L		14.362	7.833	3516	5.063	128.47
K	70.0	14.064	7.671	3664	4.958	116.48
D		13.096	.143	3206	.616	108.45
L		15.645	8.533	3830	5.515	129.56
K	80.0	15.036	8.201	3681	5.300	116.48
D		14.000	7.636	3427	4.935	108.45
D	90.0	14.849	8.099	3635	5.234	108.45
D	100.0	15.652	8.537	3832	5.517	108.45

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.524	0.411	185	0.266	104.87
D		.546	.429	193	.277	109.28
L		.468	.368	165	.238	93.61
F		.499	.392	176	.254	99.87
S		.486	.382	171	.247	97.27
K	0.12	0.587	0.461	207	0.298	106.99
D		.599	.470	211	.304	109.28
L		.518	.407	183	.263	94.56
F		.548	.431	193	.278	100.09
S		.540	.424	190	.274	98.66
K	0.15	0.670	0.526	236	0.340	109.42
D		.669	.526	236	.340	109.28
L		.587	.461	207	.298	95.73
F		.615	.483	216	.312	100.33
S		.615	.483	216	.312	100.39
K	0.20	0.792	0.624	280	0.403	112.05
D		.773	.607	272	.392	109.28
L		.688	.540	242	.349	97.25
F		.712	.559	251	.362	100.70
S		.726	.570	256	.369	102.67
K	0.30	0.998	0.783	352	0.506	115.19
D		.946	.743	334	.480	109.28
L		.861	.677	304	.437	99.45
F		.878	.689	310	.446	101.37
S		.918	.721	324	.466	105.97
K	0.40	1.165	0.915	410	0.591	116.47
D		.093	.858	385	.555	109.28
L		.010	.794	356	.513	101.03
F		.019	.800	359	.517	101.85
S		.084	.851	382	.550	108.38
K	0.50	1.313	1.031	463	0.666	117.42
D		.222	0.960	431	.620	109.28
L		.144	.898	403	.581	102.28
F		.142	.897	402	.580	102.10
S		.233	.968	435	.626	110.28
K	0.60	1.446	1.136	510	0.734	118.08
D		.337	.051	472	.679	109.28
L		.266	0.994	446	.642	103.31
F		.255	.985	442	.637	102.43
S		.370	1.076	483	.695	111.86
K	0.70	1.568	1.232	553	0.796	118.56
D		.446	.136	510	.734	109.28
L		.378	.083	486	.700	104.19
F		.360	.068	479	.690	102.77
S		.498	.176	528	.760	113.22

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	1.682	1.321	593	0.854	118.92
D		.546	.214	545	.785	109.28
L		.484	.166	523	.754	104.96
F		.456	.143	513	.739	102.94
S		.618	.271	571	.821	114.40
K	0.90	1.788	1.404	630	0.908	119.21
D		.639	.287	578	.832	109.28
L		.585	.245	559	.806	105.64
F		.549	.217	546	.786	103.28
S		.732	.360	610	.879	115.46
K	1.0	1.888	1.483	666	0.958	119.44
D		.728	.357	609	.878	109.28
L		.680	.320	592	.853	106.25
F		.634	.284	576	.830	103.36
S		.841	.446	649	.934	116.41
K	1.5	2.326	1.827	820	1.180	120.13
D		.116	.662	746	.074	109.28
L		.104	.652	742	.068	108.65
F		.017	.584	711	.024	104.15
S		.327	.828	820	.181	120.16
K	2.0	2.694	2.116	950	1.367	120.48
D		.444	1.919	862	.240	109.28
L		.468	.939	870	.253	110.38
F		.339	.837	825	.187	104.59
S		.750	2.160	969	.396	122.97
K	3.0	3.309	2.599	1167	1.680	120.84
D		2.993	.351	1055	.519	109.28
L		3.091	.428	1090	.569	112.95
F		2.907	.283	1025	.475	105.99
S		3.474	.728	1224	.763	126.83
K	4.0	3.827	3.006	1349	1.943	121.01
D		.456	2.714	1218	.754	109.28
L		.626	.848	1278	.841	114.67
F		.380	.655	1192	.716	106.89
S		4.102	3.222	1446	2.082	129.71
K	5.0	4.283	3.364	1510	2.174	121.13
D		3.864	.035	1362	1.961	109.28
L		4.104	.224	1447	2.083	116.09
F		3.806	2.989	1342	1.932	107.66
S		4.667	3.665	1645	2.369	131.99
K	6.0	4.694	3.687	1655	2.383	121.19
D		.213	.309	1485	.139	109.28
L		.541	.567	1600	.305	116.99
F		.184	.287	1475	.124	108.05
S		5.185	4.073	1828	.632	133.88

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	5.072	3.984	1790	2.575	121.25
D		4.572	.591	1612	.320	109.28
L		.947	.385	1744	.511	118.26
F		.536	.563	1599	.303	108.44
S		5.669	4.452	1998	.878	135.51
K	8.0	5.424	4.260	1910	2.754	121.29
D		4.887	3.839	1723	.481	109.28
L		5.328	4.184	1878	.704	119.13
F		4.863	3.819	1710	.463	108.74
S		6.124	4.810	2159	3.109	136.93
K	9.0	5.755	4.520	2029	2.921	121.32
D		.184	.071	1827	.631	109.28
L		.687	.467	2005	.887	119.90
F		.172	.062	1823	.625	109.04
S		6.555	5.148	2311	3.327	138.19
K	10.0	6.067	4.765	2139	3.080	121.35
D		5.464	.292	1926	2.774	109.28
L		6.030	.736	2175	3.061	120.60
F		5.462	.290	1925	2.773	109.24
S		6.967	5.472	2456	3.363	139.33
K	11.0	6.364	4.999	2244	3.231	121.36
D		5.731	.501	2020	2.909	109.28
L		6.357	.993	2241	3.227	121.23
F		5.745	.512	2025	2.916	109.55
S		7.361	5.781	2595	3.737	140.37
K	12.0	6.648	5.222	2344	3.375	121.38
D		5.986	4.701	2110	.038	109.28
L		6.672	5.240	2352	.387	121.81
F		6.025	4.732	2124	.058	109.75
S		7.741	6.080	2729	.929	141.32
K	13.0	6.921	5.435	2440	3.513	121.40
D		.930	4.893	2196	.163	109.28
L		.975	5.478	2459	.541	122.35
F		.255	4.913	2205	.175	109.85
S		8.107	6.367	2858	4.115	142.21
K	14.0	7.182	5.641	2532	3.646	121.41
D		6.465	.078	2279	.282	109.28
L		7.268	.710	2562	.689	122.85
F		6.511	.114	2295	.305	110.06
S		8.462	6.646	2983	4.296	143.04
K	15.0	7.435	5.840	2621	3.774	121.42
D		6.693	5.256	2359	.397	109.28
L		7.552	.931	2662	.833	123.32
F		6.752	.303	2380	.428	110.27
S		8.807	6.917	3104	4.470	143.81

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	7.680	6.032	2707	3.898	121.43
D		6.911	5.429	2437	.509	109.28
L		7.827	6.147	2759	.973	123.75
F		6.987	5.488	2463	.547	110.48
S		9.141	7.180	3222	4.640	144.54
K	17.0	7.916	6.218	2791	4.018	121.43
D		.125	5.596	2511	3.616	109.28
L		8.095	6.358	2854	4.109	124.17
F		7.209	5.662	2541	3.659	110.58
S		9.467	7.436	3337	4.806	145.22
K	18.0	8.146	6.398	2872	4.135	121.44
D		7.331	5.758	2584	3.721	109.28
L		8.356	6.563	2946	4.242	124.56
F		7.432	5.837	2620	3.773	110.79
S		9.785	7.685	3449	4.967	145.87
K	19.0	8.370	6.574	2951	4.249	121.45
D		7.532	5.915	2655	3.823	109.28
L		8.610	6.763	3035	4.371	124.93
F		7.643	6.003	2694	3.880	110.89
S		10.096	7.929	3559	5.125	146.49
K	20.0	8.588	6.745	3027	4.359	121.45
D		7.728	.069	2724	3.923	109.28
L		8.859	.958	3123	4.497	125.28
F		7.849	.165	2767	3.984	111.01
S		10.400	7.929	3559	5.125	147.07
K	21.0	8.800	6.912	3102	4.467	121.46
D		7.919	.219	2791	.020	109.28
L		9.102	7.149	3209	.620	125.62
F		8.058	6.329	2841	.091	111.22
S		10.697	8.402	3771	5.430	147.63
K	22.0	9.009	7.075	3175	4.572	121.46
D		8.105	6.365	2857	.114	109.28
L		9.340	7.336	3292	.741	125.94
F		8.257	6.484	2910	.191	111.32
S		10.989	8.631	3874	5.578	148.17
K	23.0	9.210	7.234	3247	4.675	121.46
D		8.287	6.508	2921	.207	109.28
L		9.574	7.519	3375	.860	126.25
F		8.458	6.643	2982	.293	111.54
S		11.275	8.855	3975	5.723	148.69
K	24.0	9.409	7.390	3317	4.776	121.46
D		8.465	6.648	2984	.297	109.28
L		9.802	7.699	3455	.942	126.55
F		8.648	6.792	3049	.390	111.65
S		11.555	9.076	4074	5.866	149.18

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	9.604	7.543	3385	4.897	121.46
D		8.640	6.786	3046	.386	109.28
L		10.027	7.875	3535	5.090	126.83
F		8.844	6.946	3118	4.489	111.86
S		11.831	9.293	4171	6.006	149.66
K	30.0	10.521	8.263	3709	5.341	121.49
D		9.464	7.432	3336	4.803	109.28
L		11.094	8.714	3911	5.632	128.11
F		9.724	7.637	3428	4.936	112.28
S		13.147	10.325	4634	6.673	151.80
K	40.0	12.151	9.543	4283	6.168	121.51
D		10.928	8.583	3852	5.547	109.28
L		13.015	10.460	4695	6.761	130.15
F		11.308	8.881	3986	5.740	113.08
S		15.525	12.193	5473	7.880	155.25
K	50.0	13.586	10.671	4789	6.818	121.52
D		12.218	9.596	4307	.202	109.28
L		14.731	11.570	5193	7.478	131.76
F		12.707	9.980	4479	6.450	113.65
K	60.0	14.883	11.689	5247	7.555	121.52
D		13.376	10.512	4718	6.794	109.28
L		16.300	12.802	5746	8.274	133.09
F		13.975	10.976	4926	7.094	114.11
K	70.0	16.077	12.624	5667	8.161	121.53
D		14.457	11.355	5096	7.339	109.28
F		15.110	.867	5327	.670	114.22
D	80.0	15.456	12.139	5448	7.845	109.28

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.615	0.657	295	0.425	111.02
D		.594	.635	285	.410	109.89
L		.521	.557	250	.360	96.45
F		.548	.586	263	.379	101.45
S		.530	.567	255	.366	98.12
K	0.12	0.661	0.706	317	0.457	111.68
D		.650	.695	312	.449	109.89
L		.576	.616	276	.398	97.43
F		.601	.642	289	.415	101.61
S		.589	.629	283	.407	99.52
K	0.15	0.754	0.806	362	0.521	114.04
D		.727	.777	349	.502	109.89
L		.652	.698	313	.451	98.63
F		.674	.721	323	.466	101.86
S		.670	.716	322	.463	101.27
K	0.20	0.891	0.953	428	0.616	116.66
D		.839	.897	403	.580	109.89
L		.765	.818	367	.529	100.20
F		.781	.835	375	.540	102.25
S		.791	.846	380	.547	103.57
K	0.30	1.117	1.194	536	0.772	119.40
D		.028	.099	494	.710	109.89
L		0.959	.025	460	.662	102.46
F		.961	.028	461	.664	102.77
S		1.000	.069	480	.691	106.90
K	0.40	1.306	1.396	627	0.902	120.92
D		.187	.269	570	.820	109.89
L		.124	.202	539	.777	104.09
F		.118	.195	536	.772	103.45
S		.181	.262	567	.816	109.33
K	0.50	1.471	1.573	706	1.016	121.81
D		.327	.419	637	0.917	109.89
L		.273	.360	610	.879	105.38
F		.255	.341	602	.867	103.88
S		.344	.436	645	.928	111.24
K	0.60	1.620	1.732	777	1.119	122.45
D		.454	.554	698	.005	109.89
L		.408	.506	676	0.973	106.44
F		.379	.474	662	.953	104.24
S		.493	.596	717	1.031	112.84
K	0.70	1.756	1.878	843	1.213	122.91
D		.570	.679	754	.085	109.89
L		.534	.640	736	.060	107.34
F		.495	.598	717	.033	104.59
S		.632	.745	783	.128	114.21

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	1.883	2.013	904	1.301	123.26
D		.679	1.795	806	.160	109.89
L		.652	.766	794	.141	108.14
F		.602	.712	769	.107	104.86
S		.763	.885	846	.218	115.40
K	0.90	2.006	2.140	960	1.383	123.54
D		1.781	1.903	854	.230	109.89
L		.764	.885	846	.218	108.84
F		.700	.818	816	.175	104.95
S		.887	2.017	905	.304	116.47
K	1.0	2.114	2.260	1014	1.460	123.75
D		1.877	.006	901	.297	109.89
L		.870	1.999	897	.292	109.47
F		.795	.919	862	.241	105.13
S		2.006	2.144	962	.386	117.43
K	1.5	2.603	2.782	1248	1.798	124.42
D		.299	.457	1103	.588	109.89
L		.342	.503	1124	.618	111.94
F		.220	.373	1065	.534	106.13
S		.535	.710	1216	.752	121.21
K	2.0	3.013	3.222	1446	2.082	124.76
D		2.654	2.837	1274	1.834	109.89
L		.747	.936	1318	.898	113.72
F		.582	.760	1239	.784	106.89
S		.994	3.201	1437	2.069	123.95
K	3.0	3.701	3.956	1776	2.563	125.11
D		.251	.475	1560	.246	109.89
L		.440	.677	1651	.377	116.29
F		.200	.421	1535	.211	108.17
S		.785	4.046	1816	.615	127.94
K	4.0	4.279	4.575	2053	2.957	125.28
D		3.754	.013	1801	.594	109.89
L		4.036	.314	1936	.788	118.14
F		3.711	3.967	1780	.564	108.64
S		4.469	4.778	2144	3.088	130.84
K	5.0	4.788	5.119	2298	3.308	125.38
D		.197	4.487	2014	2.900	109.89
L		.568	.883	2192	3.156	119.61
F		.176	.464	2003	2.885	109.34
S		5.085	5.436	2440	3.513	133.14
K	6.0	5.248	5.611	2518	3.626	125.45
D		4.597	4.915	2206	.176	109.89
L		5.054	5.403	2426	.492	120.82
F		4.591	4.908	2203	.172	109.75
S		5.650	6.040	2711	.904	135.05

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			C
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	5.660	6.063	2721	3.918	125.50
D		4.966	5.308	2383	.431	109.89
L		5.506	.885	2642	.804	121.56
F		4.978	.321	2388	.439	110.16
S		6.177	6.603	2964	4.267	136.69
K	8.0	6.064	6.483	2910	4.190	125.54
D		5.309	5.675	2547	3.668	109.89
L		.929	6.338	2845	4.097	122.74
F		.342	5.710	2563	3.691	110.58
S		6.672	7.133	3201	4.610	138.12
K	9.0	6.434	6.878	3087	4.445	125.57
D		5.631	.019	2702	3.890	109.89
L		6.330	.766	3037	4.373	123.54
F		5.682	.074	2720	3.926	110.90
S		7.142	7.635	3427	4.935	139.39
K	10.0	6.783	7.251	3255	4.687	125.59
D		5.935	6.345	2848	.101	109.89
L		6.711	7.174	3220	.637	124 25
F		.007	6.421	2882	.150	111.22
S		7.591	8.115	3642	5.245	140.54
K	11.0	7.115	7.606	3414	4.916	125.61
D		6.225	6.654	2987	.301	109.89
L		7.075	7.564	3395	.888	124.91
F		6.312	6.747	3029	.361	111.43
S		8.020	8.573	3848	5.541	141.58
K	12.0	7.433	7.946	3566	5.135	125.63
D		6.502	6.950	3119	4.492	109.89
L		7.425	7.938	3563	5.130	125.22
F		6.612	.068	3172	4.568	111.76
S		8.434	9.016	4047	5.827	142.57
K	13.0	7.755	8.271	3712	5.346	125.64
D		6.767	7.234	3247	4.676	109.89
L		7.763	8.298	3725	5.363	126.06
F		6.895	7.371	3308	4.764	111.97
S		8.834	9.443	4238	6.103	143.45
K	14.0	8.029	8.584	3853	5.548	125.65
D		7.023	7.507	3369	4.852	109.89
L		8.089	8.647	3881	5.588	126.57
F		7.169	7.664	3440	4.953	112.19
S		9.220	9.857	4424	6.370	144.29
K	15.0	8.312	8.886	3988	5.743	125.66
D		7.269	7.771	3488	.022	109.89
L		8.404	8.984	4032	.807	127.05
F		7.427	7.940	3564	.131	112.28
S		9.595	10.257	4604	6.630	145.06

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	8.585	9.178	4119	5.932	125.67
D		7.507	8.025	3602	.187	109.89
L		8.711	9.312	4180	6.018	127.51
F		7.702	8.234	3696	5.322	112.75
S		9.960	10.525	4779	6.882	145.79
K	17.0	8.850	9.461	4246	6.115	125.68
D		7.738	8.272	3713	5.347	109.89
L		9.009	9.631	4323	6.224	127.93
F		7.955	8.504	3817	5.496	112.97
S		10.315	11.027	4949	7.127	146.49
K	18.0	9.107	9.736	4370	6.293	125.68
D		7.963	8.512	3821	5.502	109.89
L		9.299	9.941	4462	6.425	128.34
F		8.202	8.768	3935	5.667	113.19
S		10.662	11.397	5116	7.366	147.14
K	19.0	9.357	10.003	4490	6.465	125.69
D		8.181	8.744	3925	5.652	109.89
L		9.583	10.243	4598	6.621	128.72
F		8.435	9.017	4047	5.828	113.31
S		11.000	11.759	5278	7.600	147.76
K	20.0	9.601	10.264	4607	6.633	125.70
D		8.394	8.973	4018	5.786	109.89
L		9.859	10.539	4730	6.812	129.08
F		8.672	9.270	4161	5.991	113.53
S		11.331	12.113	5437	7.829	148.35
K	21.0	9.838	10.517	4721	6.797	125.70
D		8.601	9.194	4127	5.942	109.89
L		10.130	10.829	4860	6.999	129.43
F		8.886	9.499	4263	.139	113.53
S		11.655	12.460	5592	8.053	148.92
K	22.0	10.070	10.765	4832	6.958	125.71
D		8.803	9.411	4224	.082	109.89
L		10.395	11.112	4987	7.182	129.76
F		9.104	9.732	4368	6.290	113.65
S		11.973	12.799	5745	8.272	149.46
K	23.0	10.297	11.008	4941	7.114	125.71
D		9.001	9.622	4319	6.219	109.89
L		10.654	11.389	5112	7.361	130.08
F		9.318	9.961	4471	6.438	113.76
S		12.285	13.132	5894	8.488	149.99
K	24.0	10.519	11.245	5047	7.268	125.72
D		9.195	9.829	4412	6.353	109.89
L		10.909	11.662	5234	7.537	130.35
F		9.528	10.185	4571	6.583	113.88
S		12.591	13.460	6041	8.699	150.49

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	10.736	11.477	5151	7.418	125.72
D		9.384	10.032	4503	6.484	109.89
L		11.159	11.929	5354	7.710	130.68
F		9.734	10.406	4671	6.725	113.99
S		12.891	13.781	6185	8.907	150.96
K	30.0	11.762	12.573	5646	8.126	125.73
D		10.280	10.989	4932	7.103	109.89
L		12.347	13.199	5924	8.531	131.99
F		10.557	11.286	5065	7.294	112.85
S		14.324	15.312	6873	9.897	153.13
K	40.0	13.583	14.520	6517	9.385	125.75
D		11.870	12.689	5695	8.201	109.89
L		14.485	15.484	6950	10.007	134.10
F		12.263	13.110	5884	8.473	113.53
S		16.916	18.083	8116	11.687	156.60
K	50.0	15.188	16.236	7287	10.493	125.76
D		13.271	14.187	6368	9.169	109.89
L		16.394	17.526	7866	11.327	135.75
F		13.766	14.716	6605	9.511	113.99
D	60.0	14.538	15.541	6975	10.045	109.89
F		15.111	16.154	7250	.440	114.22
D	70.0	15.703	16.787	7534	10.849	109.89

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.656	0.916	411	0.592	113.63
D		.673	.890	399	.575	110.36
L		.572	.797	359	.516	98.99
F		.598	.834	374	.539	103.48
S		.572	.798	359	.516	99.04
K	0.12	0.732	1.022	459	0.660	115.76
D		.698	0.974	437	.630	110.36
L		.632	.883	397	.571	99.98
F		.655	.914	411	.591	103.54
S		.635	.887	399	.573	100.46
K	0.15	0.835	1.166	523	0.753	118.06
D		.780	.090	489	.704	110.36
L		.716	0.999	448	.646	101.22
F		.734	1.025	460	.662	103.80
S		.723	.009	453	.652	102.22
K	0.20	0.984	1.374	617	0.888	120.55
D		.901	.258	565	.813	110.36
L		.840	.174	527	.758	102.83
F		.850	.187	533	.767	104.15
S		.854	.192	535	.770	104.54
K	0.30	1.233	1.721	772	1.112	123.26
D		.104	.541	691	0.996	110.36
L		.052	.468	659	.949	105.15
F		.050	.465	658	.947	104.95
S		.079	.507	677	.974	107.90
K	0.40	1.440	2.011	902	1.299	124.70
D		.274	1.779	798	.150	110.36
L		.233	.722	773	.113	106.83
F		.218	.701	763	.099	105.49
S		.274	.779	799	.150	110.35
K	0.50	1.596	2.264	1016	1.463	125.61
D		.425	1.989	893	.316	110.36
L		.396	.949	874	.260	108.15
F		.368	.910	857	.234	105.95
S		.450	2.024	909	.308	112.29
K	0.60	1.785	2.492	1119	1.611	126.21
D		.561	.179	978	.408	110.36
L		.545	.158	969	.394	109.24
F		.502	.098	941	.356	106.23
S		.611	.249	1010	.454	113.90
K	0.70	1.935	2.701	1212	1.746	126.65
D		.686	.354	1056	.521	110.36
L		.683	.350	1055	.519	110.27
F		.628	.274	1021	.470	106.60
S		.761	.459	1104	.589	115.28

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	2.074	2.895	1300	1.871	126.99
D		1.802	.516	1129	.626	110.36
L		.812	.531	1136	.635	110.98
F		.745	.437	1094	.575	106.89
S		.902	.656	1192	.717	116.49
K	0.90	2.204	3.078	1381	1.989	127.25
D		1.911	2.669	1198	.725	110.36
L		.935	.701	1212	.746	111.70
F		.853	.587	1161	.672	106.95
S		2.036	.843	1276	.838	117.56
K	1.0	2.327	3.249	1458	2.100	127.47
D		.015	2.813	1263	1.818	110.36
L		.051	.864	1286	.851	112.35
F		.957	.732	1226	.766	107.17
S		.164	3.021	1356	.953	118.53
K	1.5	2.865	4.000	1795	2.585	128.11
D		.468	3.446	1547	.227	110.36
L		.569	.587	1609	.318	114.88
F		.407	.361	1509	.172	107.66
S		.736	.820	1714	.469	122.34
K	2.0	3.316	4.630	2078	2.993	128.44
D		2.849	3.978	1786	.571	110.36
L		3.014	4.208	1889	.720	116.71
F		2.813	3.918	1759	.532	108.94
S		3.231	4.511	2025	.915	125.12
K	3.0	4.072	5.685	2552	3.675	128.76
D		3.490	4.873	2187	.085	110.36
L		.774	5.270	2365	.406	119.34
F		.487	4.868	2185	.146	110.26
S		4.084	5.702	2559	.685	129.14
K	4.0	4.708	6.574	2950	4.249	128.94
D		.030	5.627	2525	3.637	110.36
L		.427	6.182	2775	.995	121.25
F		.046	5.649	2535	.651	110.79
S		.823	6.734	3022	4.352	132.07
K	5.0	5.269	7.355	3301	4.754	129.03
D		4.505	6.291	2823	.066	110.36
L		5.011	.997	3141	.522	122.75
F		4.545	.346	2848	.101	111.32
S		5.487	7.661	3438	4.951	134.40
K	6.0	5.774	8.062	3619	5.211	129.11
D		4.935	6.891	3093	4.454	110.36
L		5.546	7.742	3475	5.004	124.85
F		4.998	6.978	3132	4.510	111.76
S		6.097	8.510	3820	5.500	136.32

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	6.238	8.711	3910	5.630	129.15
D		5.331	7.443	3341	4.811	110.36
L		6.040	8.434	3785	5.451	125.04
F		5.419	7.567	3396	4.891	112.19
S		6.665	9.306	4177	6.014	137.97
K	8.0	6.671	9.315	4181	6.020	129.19
D		5.699	7.957	3571	5.143	110.36
L		6.505	9.082	4076	.870	125.96
F		5.805	8.105	3638	.239	112.41
S		7.200	10.052	4512	6.497	139.42
K	9.0	7.077	9.882	4435	6.387	129.21
D		6.045	8.440	3788	5.455	110.36
L		.944	9.696	4352	6.267	126.78
F		.175	8.622	3870	5.573	112.75
S		7.707	10.760	4830	6.955	140.70
K	10.0	7.461	10.418	4676	6.733	129.24
D		6.371	8.896	3993	5.750	110.36
L		7.362	10.280	4656	6.644	127.52
F		6.515	9.096	4083	5.879	112.84
S		8.191	11.436	5133	7.391	141.86
K	11.0	7.826	10.928	4905	7.063	129.25
D		6.682	9.330	4188	6.030	110.36
L		7.762	10.838	4865	7.005	128.19
F		6.854	9.570	4295	6.185	113.19
S		8.655	12.084	5424	7.810	142.92
K	12.0	8.176	11.416	5124	7.378	129.27
D		6.980	9.745	4374	6.299	110.36
L		8.146	11.374	5105	7.351	128.81
F		7.180	10.026	4500	6.480	113.53
S		9.101	12.707	5703	8.213	143.90
K	13.0	8.510	11.883	5333	7.680	129.28
D		7.265	10.143	4553	6.556	110.36
L		8.516	11.891	5337	7.685	129.37
F		7.495	10.464	4697	6.763	113.85
S		9.532	13.309	5974	8.602	144.80
K	14.0	8.832	12.332	5535	7.970	129.29
D		7.539	10.526	4724	6.803	110.36
L		8.874	12.390	5561	8.008	129.90
F		7.811	10.906	4895	7.049	114.34
S		9.949	13.891	6235	8.978	145.63
K	15.0	9.143	12.766	5730	8.251	129.30
D		7.804	10.921	4890	7.044	110.36
L		9.220	12.874	5778	8.321	130.39
F		8.085	11.289	5067	7.296	114.34
S		10.354	14.457	6489	9.344	146.42

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	9.443	13.186	5918	8.522	129.31
D		8.059	11.253	5051	7.273	110.36
L		9.557	13.343	5989	8.624	130.86
F		8.359	11.671	5238	7.543	114.46
S		10.747	15.006	6735	9.699	147.17
K	17.0	9.734	13.591	6100	8.784	129.31
D		8.307	11.599	5206	7.497	110.36
L		9.884	13.800	6194	8.919	131.29
F		8.624	12.042	5405	7.783	114.57
S		11.130	15.541	6975	10.044	147.86
K	18.0	10.018	13.987	6278	9.040	129.32
D		8.548	11.935	5357	7.714	110.36
L		10.202	14.245	6394	9.207	131.71
F		8.892	12.415	5572	8.024	114.69
S		11.504	16.063	7210	10.382	148.52
K	19.0	10.293	14.371	6450	9.288	129.33
D		8.783	12.263	5504	7.926	110.36
L		10.513	14.679	6588	9.487	132.10
F		9.137	12.757	5726	8.245	114.81
S		11.869	16.573	7439	10.711	149.15
K	20.0	10.560	14.745	6618	9.530	129.34
D		9.011	12.581	5647	8.131	110.36
L		10.816	15.103	6778	9.761	132.47
F		9.383	13.102	5880	8.468	114.93
S		12.227	17.072	7663	11.034	149.75
K	21.0	10.821	15.109	6781	9.765	129.34
D		9.233	12.892	5786	8.332	110.36
L		11.113	15.517	6965	10.026	132.83
F		9.625	13.439	6032	8.686	115.04
S		12.582	17.567	7885	11.354	150.38
K	22.0	11.077	15.466	6941	9.995	129.34
D		9.450	13.195	5923	8.528	110.36
L		11.404	15.923	7147	10.291	133.17
F		9.862	13.769	6180	8.899	115.16
S		12.920	18.039	8097	11.659	150.87
K	23.0	11.325	15.814	7098	10.220	129.35
D		9.663	13.492	6056	8.720	110.36
L		11.689	16.321	7325	10.548	133.49
F		10.094	14.094	6326	9.109	115.28
S		13.256	18.509	8307	11.964	151.39
K	24.0	11.570	16.154	7250	10.441	129.35
D		9.871	13.782	6186	8.907	110.36
L		11.968	16.711	7500	10.800	133.81
F		10.321	14.412	6468	9.314	115.40
S		13.586	18.970	8514	12.260	151.90

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	11.808	16.488	7400	10.656	129.35
D		10.074	14.066	6313	9.091	110.36
L		12.242	17.094	7672	11.048	134.11
F		10.546	14.724	6609	9.516	115.52
S		13.910	19.423	8718	12.553	152.38
K	30.0	12.937	18.063	8107	11.674	129.37
D		11.036	15.409	6916	9.959	110.36
L		13.546	18.914	8489	12.224	135.46
F		11.612	16.213	7277	10.479	116.12
S		15.456	21.581	9686	13.948	154.56
K	40.0	14.940	20.861	9363	13.482	129.39
D		12.743	17.793	7986	11.500	110.36
L		15.891	22.188	9959	14.340	137.62
F		13.451	18.762	8430	12.139	116.49
K	50.0	16.705	23.325	10469	15.075	129.40
D		14.247	19.893	8929	12.857	110.36
F		15.070	21.043	9445	13.600	116.73
D	60.0	15.607	21.296	9781	14.084	110.36

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.720	1.272	571	0.822	117.53
D		.678	.198	538	.774	110.72
L		.620	.096	492	.708	101.27
F		.645	.139	511	.736	105.21
S		.609	.076	483	.693	99.41
K	0.12	0.802	1.417	636	0.915	119.52
D		.743	.313	589	.848	110.72
L		.687	.213	544	.784	102.29
F		.707	.249	561	.808	105.40
S		.676	.194	536	.773	100.83
K	0.15	0.912	1.612	723	1.042	121.62
D		.831	.467	659	0.949	110.72
L		.777	.373	616	.887	103.56
F		.793	.401	629	.905	105.67
S		.770	.360	610	.879	102.60
K	0.20	1.074	1.898	852	1.227	124.03
D		0.959	.695	759	.095	110.72
L		.911	.610	722	.041	105.21
F		.919	.623	728	.049	106.04
S		.909	.606	721	.038	104.93
K	0.30	1.346	2.374	1065	1.534	126.66
D		.174	.075	931	.341	110.72
L		.141	.017	905	.303	107.58
F		.132	.000	898	.293	106.70
S		.149	.030	911	.312	108.31
K	0.40	1.568	2.772	1244	1.791	128.07
D		.356	.396	1076	.549	110.72
L		.339	.366	1062	.529	109.30
F		.313	.320	1041	.499	107.17
S		.357	.398	1076	.549	110.76
K	0.50	1.765	3.120	1400	2.016	128.92
D		.516	2.679	1203	1.732	110 72
L		.515	.678	1202	.730	110 65
F		.474	.605	1169	.684	107.66
S		.543	.727	1224	.763	112.71
K	0.60	1.943	3.433	1541	2.219	129.52
D		.661	2.935	1317	1.897	110.72
L		.673	.963	1330	.915	111.76
F		.619	.861	1284	.849	107.95
S		.715	3.031	1360	.959	114.32
K	0.70	2.105	3.720	1670	2.404	129.94
D		1.794	.170	1423	.049	110.72
L		.826	.227	1448	.086	112.71
F		.754	.099	1391	.003	108.24
S		.875	.313	1487	.141	115.71

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	2.256	3.987	1790	2.577	130.26
D		1.918	.389	1521	.190	110.72
L		.967	.476	1560	.246	113.55
F		.882	.325	1492	.149	108.64
S		2.025	.579	1606	.313	116.92
K	0.90	2.398	4.237	1902	2.738	130.51
D		.034	3.594	1613	.323	110.72
L		.100	.710	1665	.398	114.28
F		1.998	.530	1584	.282	108.74
S		2.168	.831	1719	.476	118.00
K	1.0	2.531	4.473	2008	2.891	130.72
D		.144	3.789	1701	.449	110.72
L		.226	.934	1766	.542	114.95
F		.108	.724	1672	.407	108.84
S		.304	4.072	1827	.631	118.97
K	1.5	3.115	5.505	2471	3.558	131.35
D		2.626	4.641	2083	2.999	110.72
L		.788	.926	2211	3.184	117.54
F		.605	.604	2067	2.976	109.86
S		.913	5.147	2310	3.326	122.80
K	2.0	3.614	6.386	2866	4.127	131.96
D		.032	5.358	2405	3.463	110.72
L		.270	.779	2594	.735	119.42
F		.037	.367	2409	.469	110.90
S		.439	6.078	2728	.928	125.59
K	3.0	4.426	7.822	3511	5.055	131.97
D		3.714	6.563	2945	4.241	110.72
L		4.096	7.238	3248	.678	122.11
F		3.752	6.630	2976	.285	111.86
S		4.348	7.683	3448	.967	129.63
K	4.0	5.118	9.064	4068	5.858	132.13
D		4.288	7.578	3401	4.898	110.72
L		.805	8.490	3811	5.487	124.05
F		.358	7.701	3457	4.977	112.53
S		5.134	9.073	4072	5.864	132.57
K	5.0	5.726	10.118	4541	6.539	132.23
D		4.794	8.472	3803	5.476	110.72
L		5.438	9.610	4313	6.211	125.58
F		4.902	8.662	3888	5.598	113.19
S		5.841	10.322	4633	6.671	134.90
K	6.0	6.275	11.089	4977	7.167	132.29
D		5.252	9.281	4166	5.985	110.72
L		6.017	10.633	4773	6.872	126.85
F		5.391	9.526	4276	.157	113.65
S		6.491	11.469	5148	7.413	136.83

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	6.780	11.982	5377	7.742	132.34
D		5.673	10.024	4499	6.479	110.72
L		6.555	11.583	5199	7.486	127.93
F		5.833	10.308	4627	6.662	113.85
S		7.039	12.439	5583	8.039	137.38
K	8.0	7.251	12.813	5751	8.281	132.37
D		6.064	10.717	4810	6.926	110.72
L		7.059	12.303	5599	8.062	128.87
F		6.256	11.056	4962	7.146	114.22
S		7.665	13.544	6079	8.754	139.93
K	9.0	7.692	13.592	6101	8.785	132.40
D		6.432	11.367	5102	7.346	110.72
L		7.536	13.316	5977	8.607	129.71
F		6.649	11.750	5274	7.594	114.45
S		8.205	14.499	6507	9.371	141.23
K	10.0	8.109	14.330	6432	9.262	132.42
D		6.780	11.981	5378	7.744	110.72
L		7.990	14.118	6337	9.124	130.46
F		.023	12.411	5570	8.021	114.69
S		8.720	15.409	6916	9.959	142.39
K	11.0	8.506	15.031	6746	9.715	132.44
D		7.111	12.566	5640	8.122	110.72
L		8.423	14.885	6682	9.621	131.15
F		7.381	13.043	5854	8.430	114.93
S		9.214	16.282	7309	10.523	143.46
K	12.0	8.885	15.702	7047	10.148	132.46
D		7.427	13.125	5891	8.483	110.72
L		8.840	15.622	7012	10.096	131.78
F		7.725	13.651	6127	8.823	115.16
S		9.689	17.122	7685	11.066	144.43
K	13.0	9.249	16.344	7336	10.564	132.47
D		7.731	13.661	6131	8.829	110.72
L		9.242	16.332	7330	10.555	132.36
F		8.057	14.238	6391	9.202	115.40
S		10.147	17.932	8049	11.590	145.34
K	14.0	9.599	16.962	7613	10.963	132.47
D		8.022	14.176	6363	9.163	110.72
L		9.630	17.017	7638	10.998	132.90
F		8.388	14.822	6652	9.580	115.76
S		10.592	18.718	8401	12.097	146.18
K	15.0	9.936	17.559	7881	11.349	132.48
D		8.304	14.674	6586	9.484	110.72
L		10.006	17.681	7936	11.428	133.41
F		8.651	15.358	6893	9.926	115.88
S		11.025	19.483	8744	12.592	147.00

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	10.263	18.135	8,140	11.721	132.49
D		8.596	15.190	6,818	9.818	110.72
L		10.371	18.326	8,225	11.844	133.89
F		8.985	15.878	7,127	10.262	116.00
S		11.442	20.219	9,073	13.065	147.71
K	17.0	10.579	18.695	8,391	12.083	132.50
D		8.840	15.622	7,011	10.096	110.72
L		10.725	18.953	8,507	12.250	134.33
F		9.272	16.384	7,354	10.590	116.12
S		11.850	20.941	9,399	13.534	148.41
K	18.0	10.887	19.238	8,634	12.434	132.50
D		9.096	16.074	7,215	10.389	110.72
L		11.071	19.564	8,781	12.645	134.76
F		9.561	16.895	7,583	10.919	116.37
S		12.248	21.644	9,715	13.989	149.08
K	19.0	11.185	19.766	8,872	12.775	132.51
D		9.346	16.515	7,413	10.674	110.72
L		11.408	20.161	9,049	13.030	135.15
F		9.833	17.376	7,799	11.230	116.49
S		12.637	22.331	10,023	14.433	149.70
K	20.0	11.476	20.280	9,102	13.107	132.52
D		9.588	16.944	7,605	10.951	110.72
L		11.738	20.742	9,310	13.406	135.54
F		10.099	17.846	8,010	11.534	116.61
S		13.017	23.003	10,324	14.867	150.31
K	21.0	11.760	20.782	9,327	13.431	132.52
D		9.825	17.362	7,793	11.222	110.72
L		12.060	21.312	9,565	13.774	135.90
F		10.359	18.302	8,215	11.829	116.74
S		13.389	23.661	10,619	15.292	150.88
K	22.0	12.037	21.272	9,547	13.748	132.53
D		10.046	17.771	7,976	11.486	110.72
L		12.375	21.869	9,815	14.134	136.25
F		10.603	18.733	8,408	12.107	116.74
S		13.754	24.306	10,909	15.709	151.43
K	23.0	12.308	21.750	9,762	14.057	132.53
D		10.283	18.171	8,156	11.744	110.72
L		12.684	22.416	10,061	14.487	136.59
F		10.853	19.178	8,608	12.395	116.86
S		14.115	24.944	11,195	16.121	151.99
K	24.0	12.573	22.218	9,972	14.360	132.33
D		10.504	18.562	8,331	11.997	110.72
L		12.988	22.951	10,301	14.834	136.91
F		11.086	19.591	8,793	12.661	116.86
S		14.464	25.560	11,472	16.520	152.46

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	12.833	22.677	10,178	14.657	132.54
D		10.720	18.944	8,503	12.244	110.72
L		13.285	23.478	10,538	15.173	137.21
F		11.327	20.016	8,984	12.937	116.98
S		14.809	26.170	11,746	16.914	152.95
K	30.0	14.059	24.844	11,151	16.057	132.55
D		11.744	20.752	9,314	13.412	110.72
L		14.700	25.977	11,659	16.789	138.59
F		12.448	21.997	9,873	14.217	117.35
S		16.455	29.079	13,052	18.794	155.14
K	40.0	16.236	28.691	12,877	18.543	132.57
D		13.560	23.963	10,755	15.487	110.72
L		17.245	30.474	13,678	19.696	140.80
F		14.435	25.509	11,449	16.487	117.86
D	50.0	15.161	26.792	12,025	17.316	110.72
F		16.174	28.583	12,829	18.473	118.12

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.778	1.698	762	1.098	120.59
D		.717	.563	702	.010	111.01
L		.668	.456	653	0.941	103.36
F		.690	.505	675	.973	106.89
S		.648	.413	634	.913	100.34
K	0.12	0.867	1.892	849	1.223	122.62
D		.785	.713	769	.107	111.01
L		.739	.611	723	.041	104.41
F		.757	.652	741	.068	107.08
S		.720	.570	705	.015	101.77
K	0.15	0.987	2.153	966	1.391	124.80
D		.878	1.915	860	.238	111.01
L		.836	.823	818	.178	105.69
F		.849	.852	831	.197	107.36
S		.819	.786	802	.154	103.56
K	0.20	1.177	2.567	1152	1.659	127.14
D		.013	.211	992	.429	111.01
L		.980	.139	960	.382	107.38
F		.983	.144	963	.386	107.66
S		.967	.109	947	.363	105.91
K	0.30	1.450	3.163	1420	2.044	129.38
D		.241	2.708	1215	1.750	111.01
L		.228	.678	1202	.731	109.80
F		.210	.640	1185	.706	108.24
S		.222	.667	1197	.723	109.32
K	0.40	1.692	3.691	1656	2.385	131.03
D		.433	.127	1403	.021	111.01
L		.440	.142	1410	.031	111.55
F		.404	.063	1375	1.979	108.74
S		.443	.149	1413	2.035	111.80
K	0.50	1.903	4.152	1864	2.684	131.86
D		.602	3.496	1569	.259	111.01
L		.630	.556	1633	.352	112.93
F		.577	.440	1544	.213	109.24
S		.642	.582	1608	.315	113.76
K	0.60	2.094	4.568	2050	2.953	132.43
D		1.755	3.830	1719	.475	111.01
L		.804	.935	1766	.543	114.06
F		.731	.775	1695	.440	109.44
S		.824	.980	1786	.572	115.62
K	0.70	2.269	4.996	2222	3.199	132.84
D		1.896	.136	1857	2.673	111.01
L		.965	.286	1924	.770	115.04
F		.874	.089	1835	.643	109.73
S		.995	.353	1954	.813	116.83

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	2.431	5.304	2381	3.428	133.15
D		.027	4.422	1985	2.858	111.01
L		.116	.616	2072	.984	115.89
F		.013	.392	1971	.839	110.27
S		.155	.701	2110	3.038	118.01
K	0.90	2.583	5.636	2530	3.643	133.40
D		.150	4.690	2105	.031	111.01
L		.259	.928	2212	.185	116.64
F		.141	.672	2097	.020	110.58
S		.307	5.032	2259	.252	119.11
K	1.0	2.727	5.950	2670	3.845	133.60
D		.266	4.944	2219	.195	111.01
L		.395	5.225	2345	.377	117.32
F		.262	4.934	2215	.189	110.79
S		.451	5.348	2400	.456	120.09
K	1.5	3.355	7.320	3285	4.742	134.20
D		2.775	6.055	2718	3.913	111.01
L		.999	.543	2937	4.229	119.96
F		.776	.055	2718	.913	111.01
S		3.099	.760	3034	.369	123.95
K	2.0	3.883	8.471	3802	5.475	134.50
D		.205	6.992	3138	4.519	111.01
L		.518	7.676	3445	.961	121.87
F		.255	.101	3187	.589	112.74
S		.659	.983	3583	5.160	126.76
K	3.0	4.766	10.398	4667	6.720	134.80
D		3.925	8.563	3843	5.534	111.01
L		4.406	9.613	4315	6.213	124.62
F		.018	8.766	3935	5.666	113.65
S		.626	10.092	4530	6.523	130.83
K	4.0	5.511	12.029	5396	7.771	134.96
D		4.532	9.888	4458	6.390	111.01
L		5.169	11.277	5062	7.289	126.61
F		4.672	10.192	4574	6.587	114.43
S		5.463	11.918	5349	7.703	133.81
K	5.0	6.165	13.449	6036	8.692	135.05
D		5.067	11.055	4962	7.145	111.01
L		.851	12.764	5729	8.250	128.17
F		.240	11.432	5131	7.389	114.81
S		6.215	13.559	6085	8.763	136.15
K	6.0	6.756	14.739	6615	9.526	135.11
D		5.551	12.110	5435	7.827	111.01
L		6.474	14.123	6339	9.128	129.47
F		5.764	12.575	5644	8.128	115.28
S		6.906	15.066	6762	9.737	138.11

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	7.470	16.296	7,314	10.532	135.16
D		5.995	13.080	5,871	8.454	111.01
L		7.052	15.382	6,905	9.943	130.57
F		6.252	13.639	6,122	8.815	115.76
S		7.549	16.469	7,392	10.644	139.78
K	8.0	7.805	17.029	7,643	11.006	135.19
D		6.409	13.983	6,276	9.038	111.01
L		7.594	16.568	7,436	10.708	131.54
F		6.713	14.612	6,558	9.444	116.00
S		8.155	17.791	7,985	11.498	141.24
K	9.0	8.280	18.065	8,108	11.676	135.22
D		6.782	14.831	6,657	9.586	111.01
L		8.107	17.687	7,939	11.431	132.39
F		7.126	15.547	6,978	10.048	116.37
S		8.729	19.044	8,547	12.308	142.54
K	10.0	8.730	19.045	8,548	12.309	135.24
D		7.166	15.633	7,017	10.104	111.01
L		8.596	18.752	8,417	12.120	133.16
F		7.535	16.439	7,379	10.625	116.73
S		9.278	20.241	9,085	13.081	143.73
K	11.0	9.157	19.978	8,967	12.912	135.26
D		7.516	16.397	7,356	10.597	111.01
L		9.062	19.771	8,874	12.778	133.85
F		7.912	17.260	7,747	11.155	116.86
S		9.803	21.387	9,599	13.822	144.80
K	12.0	9.565	20.868	9,366	13.487	135.27
D		7.850	17.126	7,687	11.069	111.01
L		9.511	20.750	9,313	13.410	134.50
F		8.281	18.066	8,109	11.676	117.11
S		10.309	22.490	10,094	14.535	145.78
K	13.0	9.957	21.722	9,750	14.039	135.28
D		8.170	17.825	8,000	11.520	111.01
L		9.943	21.692	9,736	14.020	135.09
F		8.628	18.824	8,449	12.166	117.23
S		10.796	23.555	10,572	15.224	146.70
K	14.0	10.333	22.544	10,119	14.571	135.29
D		8.479	18.498	8,302	11.966	111.01
L		10.360	22.603	10,144	14.608	135.65
F		8.973	19.576	8,786	12.652	117.48
S		11.270	24.586	11,035	15.890	147.55
K	15.0	10.697	23.337	10,474	15.083	135.30
D		8.776	19.147	8,594	12.375	111.01
L		10.765	23.485	10,541	15.178	136.16
F		9.296	20.281	9,103	13.108	117.59
S		11.728	25.587	11,484	16.537	148.34

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	11.048	24.103	10,818	15.578	135.31
D		9.064	19.775	8,876	12.781	111.01
L		11.157	24.342	10,925	15.732	136.65
F		9.613	20.973	9,413	13.555	117.74
S		12.157	26.559	11,920	17.165	149.09
K	17.0	11.388	24.846	11,151	16.058	135.31
D		9.343	20.384	9,149	13.174	111.01
L		11.539	25.174	11,299	16.270	137.11
F		9.920	21.642	9,713	13.987	117.86
S		12.608	27.506	12,345	17.777	149.80
K	18.0	11.719	25.568	11,476	16.525	135.32
D		9.614	20.975	9,414	13.556	111.01
L		11.911	25.986	11,663	16.795	137.53
F		10.230	22.318	10,017	14.424	118.12
S		13.031	28.431	12,761	18.375	150.47
K	19.0	12.041	26.269	11,791	16.978	135.32
D		9.878	21.550	9,672	13.928	111.01
L		12.274	26.777	12,018	17.306	137.94
F		10.510	22.929	10,291	14.819	118.12
S		13.445	29.333	13,165	18.958	151.10
K	20.0	12.354	26.953	12,097	17.421	135.33
D		10.133	22.109	9,923	14.289	111.01
L		12.628	27.550	12,365	17.806	138.33
F		10.794	23.551	10,570	15.221	118.25
S		13.850	30.216	13,561	19.528	151.71
K	21.0	12.659	27.619	12,396	17.850	135.33
D		10.384	22.655	10,168	14.642	111.01
L		12.975	28.307	12,705	18.295	138.71
F		11.073	24.158	10,843	15.613	118.38
S		14.246	31.080	13,949	20.133	152.30
K	22.0	12.958	28.270	12,688	18.271	135.34
D		10.628	23.188	10,407	14.987	111.01
L		13.314	29.047	13,037	18.773	139.06
F		11.334	24.727	11,098	15.981	118.38
S		14.634	31.927	14,329	20.634	152.84
K	23.0	13.250	28.906	12,974	18.682	135.34
D		10.867	23.709	10,641	15.324	111.01
L		13.647	29.773	13,363	19.242	139.40
F		11.601	25.310	11,360	16.358	118.51
S		15.015	32.758	14,702	21.171	153.38
K	24.0	13.534	29.529	13,253	19.085	135.35
D		11.101	24.220	10,870	15.653	111.01
L		13.973	30.485	13,682	19.702	139.73
F		11.823	25.854	11,604	16.710	118.51

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			C
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	13.814	30.138	13,527	19.479	135.35
D		11.330	24.719	11,094	15.976	111.01
L		14.293	31.183	13,996	20.154	140.04
F		12.108	26.416	11,856	17.073	118.64
K	30.0	15.134	33.017	14,819	21.339	135.36
D		12.412	27.078	12,153	17.501	111.01
L		15.815	34.503	15,486	22.295	141.45
F		13.308	29.033	13,031	18.764	119.02
D	40.0	14.332	31.267	14,033	20.208	111.01
F		15.418	33.636	15,097	21.734	119.42
D	50.0	16.023	34.958	15,690	22.954	111.01

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.836	2.208	991	1.427	123.57
D		.753	1.988	892	.285	111.26
L		.713	.882	845	.216	105.30
F		.735	.940	870	.254	108.54
S		.682	.800	808	.163	100.71
K	0.12	0.931	2.402	1078	1.517	125.54
D		.825	.178	978	.408	111.26
L		.788	.082	935	.346	106.37
F		.805	.125	954	.373	108.54
S		.758	.000	898	.293	102.16
K	0.15	1.058	2.794	1254	1.806	127.66
D		0.922	.435	1093	.574	111.26
L		.893	.357	1058	.523	107.68
F		.903	.384	1070	.541	108.94
S		.862	.275	1021	.470	103.95
K	0.20	1.244	3.284	1474	2.122	129.94
D		.065	2.812	1262	1.817	111.26
L		.047	.765	1241	.787	109.40
F		.045	.695	1210	.742	109.14
S		.018	.687	1206	.736	106.09
K	0.30	1.542	4.069	1827	2.626	132.39
D		.304	3.444	1545	.226	111.26
L		.312	.462	1554	.238	111.86
F		.286	.394	1523	.193	109.65
S		.287	.396	1524	.195	109.73
K	0.40	1.814	4.789	2150	3.095	134.00
D		.506	3.976	1785	2.570	111.26
L		.539	4.062	1823	.625	113.65
F		.494	3.945	1771	.550	110.37
S		.519	4.010	1800	.592	112.21
K	0.50	2.036	5.373	2412	3.474	134.50
D		1.684	4.446	1995	2.873	111.26
L		.742	.597	2063	.971	115.05
F		.682	.440	1993	.870	111.11
S		.729	.563	2048	.949	114.19
K	0.60	2.239	5.911	2653	3.821	135.05
D		1.845	4.870	2186	.148	111.26
L		.927	5.087	2283	.288	116.20
F		.844	4.869	2185	.146	111.22
S		.921	5.070	2276	.277	115.83
K	0.70	2.426	6.404	2874	4.139	135.45
D		1.993	5.260	2361	3.397	111.26
L		2.099	.541	2487	.581	117.20
F		.002	.284	2372	.415	111.76
S		.100	.543	2488	.582	117.23

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	2.599	6.861	3080	4.435	135.75
D		.130	5.623	2524	3.634	111.26
L		.261	.967	2678	.857	118.06
F		.144	.660	2540	.658	111.97
S		.268	.987	2687	.870	118.45
K	0.90	2.762	7.307	3272	4.712	135.99
D		.259	5.964	2677	3.855	111.26
L		.413	6.370	2859	4.117	118.83
F		.281	.021	2702.	3.891	112.31
S		.428	.409	2877	4.142	119.55
K	1.0	2.912	7.688	3451	4.969	136.05
D		.382	6.287	2822	.063	111.26
L		.559	.754	3031	.365	119.52
F		.408	.371	2860	.118	112.75
S		.580	.812	3057	.402	120.53
K	1.5	3.585	9.946	4248	6.117	136.75
D		2.917	7.700	3456	4.977	111.26
L		3.204	8.459	3797	5.467	122.21
F		2.992	7.897	3545	.104	114.11
S		3.262	8.611	3865	.565	124.41
K	2.0	4.149	10.952	4916	7.079	137.05
D		3.368	8.891	3991	5.747	111.26
L		.759	9.923	4454	6.413	124.13
F		.456	.124	4095	5.897	114.16
S		.852	10.168	4564	6.571	127.23
K	3.0	5.092	13.442	6033	8.688	137.34
D		4.125	10.890	4887	7.038	111.26
L		.708	12.427	5578	8.032	126.96
F		.274	11.283	5064	7.292	115.28
S		.869	12.854	5769	8.308	121.32
K	4.0	5.886	15.539	6974	10.043	137.49
D		4.763	12.574	5644	8.127	111.26
L		5.523	14.578	6543	9.422	128.99
F		4.951	13.069	5866	8.447	115.64
S		5.750	15.179	6813	9.811	134.31
K	5.0	6.585	17.384	7802	11.235	137.57
D		5.325	14.058	6310	9.086	111.26
L		6.251	16.501	7406	10.664	130.61
F		5.576	14.719	6607	9.513	116.49
S		6.542	17.269	7751	11.161	136.66
K	6.0	7.217	19.051	8551	12.313	137.63
D		5.834	15.400	6912	9.953	111.26
L		6.916	18.258	8194	11.800	131.90
F		.134	16.193	7268	10.465	116.98
S		7.269	19.188	8612	12.401	138.62

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	7.798	20.584	9.239	13.304	137.68
D		6.301	16.634	7,466	10.750	111.26
L		7.534	19.888	8,927	12.854	133.02
F		6.647	17.546	7,875	11.340	117.36
S		7.946	20.977	9,415	13.577	140.31
K	8.0	8.338	22.011	9,879	14.226	137.71
D		6.736	17.782	7,981	11.493	111.26
L		8.114	21.420	9,614	13.844	134.01
F		7.121	18.798	8,437	12.150	117.61
S		8.584	22.660	10,170	14.645	141.77
K	9.0	8.846	23.350	10,480	15.092	137.74
D		7.145	18.861	8,465	12.190	111.26
L		8.662	22.865	10,262	14.778	134.87
F		7.569	19.981	8,968	12.914	117.86
S		9.189	24.257	10,887	15.677	143.08
K	10.0	9.325	24.617	11,049	15.910	137.76
D		7.531	19.881	8,923	12.849	111.26
L		9.184	24.242	10,881	15.668	135.66
F		8.005	21.131	9,484	13.657	118.25
S		9.763	25.773	11,568	16.657	144.23
K	11.0	9.782	25.822	11,589	16.689	137.77
D		7.899	20.852	9,359	13.476	111.26
L		9.682	25.599	11,471	16.519	136.37
F		8.423	22.235	9,980	14.371	118.63
S		10.319	27.240	12,226	17.605	145.34
K	12.0	10.217	26.972	12,106	17.432	137.79
D		8.250	21.779	9,775	14.076	111.26
L		10.161	26.824	12,039	17.336	137.02
F		8.807	23.249	10,435	15.026	118.77
S		10.851	28.645	12,857	18.513	146.33
K	13.0	10.636	28.076	12,602	18.146	137.80
D		8.587	22.668	10,174	14.650	111.26
L		10.623	28.042	12,586	18.124	137.63
F		9.167	24.198	10,861	15.640	118.77
S		11.365	30.001	13,465	19.390	147.25
K	14.0	11.038	29.137	13,078	18.832	137.81
D		8.911	23.523	10,558	15.203	111.26
L		11.069	29.219	13,114	18.885	138.19
F		9.534	25.166	11,295	16.265	119.03
S		11.862	31.315	14,055	20.239	148.10
K	15.0	11.426	30.163	13,538	19.495	137.82
D		9.224	24.350	10,928	15.737	111.26
L		11.501	30.360	13,626	19.622	138.72
F		9.868	26.050	11,692	16.837	119.03
S		12.345	32.588	14,626	21.062	148.90

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	11.799	31.146	13,979	20.130	137.82
D		9.526	25.148	11,287	16.253	111.26
L		11.920	31.467	14,123	20.338	139.21
F		10.203	26.934	12,089	17.408	119.16
S		12.812	33.822	15,180	21.860	149.63
K	17.0	12.165	32.113	14,413	20.755	137.83
D		9.820	25.922	11,634	16.753	111.26
L		12.328	32.544	14,606	21.033	139.68
F		10.528	27.793	12,475	17.963	119.29
S		13.271	35.034	15,724	22.643	150.36
K	18.0	12.518	33.046	14,832	21.357	137.83
D		10.104	26.674	11,972	17.239	111.26
L		12.725	33.593	15,077	21.711	140.11
F		10.846	28.631	12,851	18.505	119.42
S		13.717	36.210	16,252	23.403	151.03
K	19.0	12.863	33.955	15,240	21.945	137.85
D		10.381	27.405	12,300	17.712	111.26
L		13.113	34.616	15,537	22.373	140.53
F		11.156	29.449	13,218	19.033	119.55
S		14.152	37.360	16,768	24.146	151.67
K	20.0	13.197	34.837	15,636	22.516	137.85
D		10.651	28.117	12,619	18.172	111.26
L		13.492	35.615	15,985	23.019	140.90
F		11.458	30.247	13,576	19.549	119.69
S		14.578	38.484	17,273	24.873	152.28
K	21.0	13.522	35.696	16,021	23.071	137.85
D		10.913	28.810	12,930	18.620	111.26
L		13.862	36.593	16,424	23.650	141.31
F		11.751	31.021	13,923	20.049	119.79
S		14.995	39.584	17,766	25.584	152.86
K	22.0	13.841	36.539	16,399	23.615	137.86
D		11.171	29.488	13,235	19.058	111.26
L		14.225	37.550	16,853	24.269	141.67
F		12.044	31.794	14,270	20.549	119.96
S		15.404	40.664	18,251	26.282	153.42
K	23.0	14.153	37.360	16,768	24.146	137.86
D		11.421	30.151	13,532	19.487	111.26
L		14.580	38.488	17,275	24.875	142.02
F		12.329	32.545	14,607	21.034	120.09
K	24.0	14.458	38.165	17,130	24.667	137.86
D		11.667	30.800	13,824	19.906	111.26
L		14.929	39.408	17,688	25.470	142.35
F		12.608	33.284	14,935	21.507	120.23

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	25.0	14.757	38.953	17,483	25.176	137.87
D		11.908	31.435	14,109	20.317	111.26
L		15.271	40.312	18,093	26.054	142.67
F		12.883	34.007	15,263	21.979	120.36
K	30.0	16.167	42.678	19,155	27.583	137.87
D		13.044	34.435	15,456	22.256	111.26
F		14.112	37.253	16,720	24.077	120.36
D	40.0	15.063	39.762	17,846	25.699	111.26
F		16.332	43.113	19,349	27.862	120.63

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.893	2.806	1259	1.813	126.30
D		.788	.493	1111	.600	111.46
L		.758	.379	1068	.537	107.08
F		.779	.445	1097	.580	110.06
S		.717	.251	1010	.455	101.33
K	0.12	0.993	3.120	1401	2.017	128.22
D		.863	2.712	1217	1.783	111.46
L		.838	.632	1181	.701	108.16
F		.854	.683	1204	.734	110.26
S		.796	.501	1123	.617	102.78
K	0.15	1.128	3.545	1591	2.291	130.28
D		0.965	.033	1361	1.960	111.46
L		.948	2.979	1337	.925	109.50
F		.958	3.009	1350	.945	110.58
S		.906	2.846	1277	.839	104.59
K	0.20	1.325	4.162	1868	2.690	132.48
D		.115	3.502	1572	.263	111.46
L		.112	.495	1569	.259	111.25
F		.110	.487	1565	.254	111.00
S		.070	.361	1508	.172	106.96
K	0.30	1.652	5.189	2329	3.354	134.86
D		.365	4.289	1925	2.772	111.46
L		.393	.377	1965	.829	113.75
F		.369	.300	1930	.779	111.76
S		.352	.248	1907	.745	110.40
K	0.40	1.925	6.048	2714	3.909	136.12
D		.576	4.952	2222	.201	111.46
L		.634	5.135	2305	.319	115.57
F		.588	4.990	2239	.225	112.30
S		.597	5.017	2252	.242	112.91
K	0.50	2.165	6.800	3052	4.395	136.90
D		1.762	5.537	2485	3.578	111.46
L		.850	.812	2608	.756	116.99
F		.781	.595	2511	.616	112.63
S		.817	.707	2562	.689	114.89
K	0.60	2.372	7.434	3344	4.816	136.93
D		1.931	6.065	2722	3.920	111.46
L		2.047	.431	2886	4.156	118.17
F		1.961	.159	2765	3.981	113.19
S		2.019	.342	2846	4.099	116.54
K	0.70	2.578	8.100	3636	5.235	137.82
D		.085	6.551	2940	4.234	111.46
L		.230	7.005	3144	.527	119.18
F		.124	6.673	2995	.313	113.53
S		.205	.933	3112	.481	117.95

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	2.762	8.678	3,895	5.608	138.11
D		.229	7.003	3,143	4.526	111.46
L		.401	.544	3,386	.876	120.06
F		.275	.148	3,208	.620	113.76
S		.384	.489	3,361	.730	119.18
K	0.90	2.935	9.219	4,138	5.958	138.33
D		.364	7.428	3,334	4.801	111.46
L		.563	8.053	3,615	5.205	120.84
F		.421	7.605	3,413	4.915	114.11
S		.552	8.016	3,598	5.181	120.29
K	1.0	3.097	9.731	4,368	6.289	138.52
D		2.492	7.830	3.514	5.061	111.46
L		.718	8.538	3,832	.518	121.54
F		.559	.039	3,609	.197	114.45
S		.712	.520	3,824	.506	121.28
K	1.5	3.809	11.966	5,371	7.733	139.07
D		.053	9.590	4,304	6.198	111.46
L		.404	10.693	4,799	.911	124.28
F		.164	9.939	4,461	.424	115.52
S		.428	10.770	4,834	.961	125.18
K	2.0	4.407	13.844	6,214	8.948	139.35
D		3.525	11.073	4,970	7.157	111.46
L		.993	12.544	5,630	8.107	126.26
F		.672	11.536	5,178	7.456	116.12
S		4.049	12.718	5,709	8.220	128.02
K	3.0	5.408	16.991	7,626	10.981	139.64
D		4.317	13.562	6,087	8.765	111.46
L		5.001	15.710	7,051	10.153	129.11
F		4.536	14.249	6,395	9.209	117.11
S		5.118	16.078	7,216	10.391	132.14
K	4.0	6.251	19.639	8,815	12.693	139.78
D		4.985	15.660	7,029	10.121	111.46
L		5.866	18.429	8,272	11.911	131.17
F		.265	16.542	7,424	10.691	117.73
S		6.044	18.986	8,522	12.271	135.13
K	5.0	6.993	21.970	9,861	14.200	139.86
D		5.573	17.509	7,858	11.316	111.46
L		6.640	20.860	9,362	13.481	132.79
F		5.913	18.527	8,337	12.005	118.25
S		6.876	21.600	9,695	13.960	137.51
K	6.0	7.664	24.077	10,807	15.561	139.92
D		6.105	19.180	8,628	12.424	111.46
L		7.347	23.080	10,359	14.917	134.13
F		6.498	20.414	9,162	13.194	118.64
S		7.640	24.001	10,772	15.512	139.48

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	8.280	26.014	11,676	16.813	139.96
D		6.594	20.716	9,298	13.389	111.46
L		8.003	25.142	11,284	16.249	135.27
F		7.050	22.147	9,940	14.313	119.16
S		8.352	26.238	11,776	16.958	141.17
K	8.0	8.854	27.816	12,485	17.978	139.99
D		7.050	22.147	9,940	14.313	111.46
L		8.619	27.076	12,152	17.500	136.27
F		7.553	23.729	10,650	15.336	119.42
S		9.022	28.343	12,721	18.318	142.64
K	9.0	9.393	29.509	13,245	19.072	140.02
D		7.477	23.490	10,542	15.182	111.46
L		9.202	28.908	12,973	18.681	137.15
F		8 020	25.196	11,308	16.284	119.55
S		9.657	30.340	13,617	19.609	143.96
K	10.0	9.902	31.110	13,963	20.106	140.04
D		7.882	24.761	11,113	16.003	111.46
L		9.755	30.645	13,754	19.807	137.95
F		8.473	26.618	11,947	17.203	119.82
S		10.264	32.246	14,473	20.841	145.15
K	11.0	10.385	32.632	14,646	21.091	140.05
D		8.266	25.969	11,655	16.784	111.46
L		10.284	32.310	14,501	20.882	138.68
F		8.906	27.980	12,558	18.084	120.09
S		10.845	34.071	15,292	22.021	146.23
K	12.0	10.850	34.086	15.299	22.030	140.07
D		8.634	27.124	12,174	17.530	111.46
L		10.794	33.909	15,219	21.916	139.34
F		9.323	29.290	13,146	18.930	120.36
S		11.405	35.829	16,081	23.157	147.24
K	13.0	11.320	35.480	15,925	22.931	140.08
D		8.986	28.231	12,671	18.246	111.46
L		11.284	35.449	15,910	22.911	139.96
F		9.704	30.485	13,682	19.703	120.36
S		11.945	37.526	16,843	24.253	148.16
K	14.0	11.721	36.822	16,527	23.798	140.09
D		9.326	29.297	13,149	18.935	111.46
L		11.757	36.938	16,578	23.873	140.53
F		10.082	31.672	14.215	20.470	120.49
S		12.467	39.168	17,580	25.314	149.01
K	15.0	12.133	38.117	17,109	24.636	140.10
D		9.653	30.326	13,611	19.600	111.46
L		12.216	38.380	17,225	24.805	141.06
F		10.435	32.784	14,714	21.189	120.49
S		12.975	40.762	18,295	26.345	149.82

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	12.531	39.368	17,670	25.444	140.10
D		9.969	31.320	14,057	20.242	111.46
L		12.662	39.780	17,854	25.710	141.56
F		10.790	33.897	15,214	21.908	120.63
S		13.468	42.312	18,991	27.347	150.58
K	17.0	12.917	40.581	18,214	26.228	140.11
D		10.276	32.284	14,490	20.865	111.46
L		13.095	41.140	18,465	26.589	142.04
F		11.122	34.940	15,682	22.738	120.63
S		13.948	43.820	19,667	28.321	151.29
K	18.0	13.293	41.760	18,743	26.990	140.11
D		10.574	33.221	14,910	21.470	111.46
L		13.517	42.467	19,060	27.447	142.48
F		11.457	35.994	16,155	23.263	120.77
S		14.417	45.292	20,329	29.273	151.96
K	19.0	13.658	42.966	19,302	27.795	140.12
D		10.864	34.130	15,319	22.059	111.46
L		13.929	43.760	19,640	28.283	142.91
F		11.771	36.980	16,220	23.357	120.77
S		14.875	46.729	20,973	30.202	152.61
K	20.0	14.013	44.023	19,759	28.453	140.13
D		11.146	35.017	15,716	22.632	111.46
L		14.332	45.024	20,208	29.099	143.31
F		12.091	37.985	17,049	24.550	120.91
S		15.322	48.136	21,605	31.111	153.22
K	21.0	14.359	45.111	20,247	29.156	140.13
D		11.421	35.881	16,104	23.190	111.46
L		14.725	46.259	20,762	29.898	143.70
F		12.415	38.966	17,489	25.184	121.04
K	22.0	14.697	46.172	20,723	29.842	140.13
D		11.690	36.726	16,483	23.736	111.46
L		15.110	47.469	21,305	30.679	144.06
F		12.710	39.930	17,921	25.807	121.18
K	23.0	15.028	47.212	21,190	30.513	140.14
D		11.953	37.551	16,854	24.269	111.46
F		13.010	40.873	18,345	26.416	121.32
D	24.0	12.210	38.359	17,217	24.792	111.46
F		13.306	41.801	18,761	27.016	121.46
D	25.0	12.462	39.150	17,572	25.303	111.46
F		13.595	42.711	19,170	27.605	121.60
D	30.0	13.651	42.886	19,249	27.718	111.46
F		14.927	46.895	21,048	30.302	121.88
D	40.0	15.763	49.521	22,175	32.006	111.46
F		17.297	54.339	24,389	35.120	122.30

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	0.948	3.495	1569	2.259	128.81
D		.822	.030	1360	1.945	111.63
L		.801	2.952	1325	.908	108.76
F		.823	3.033	1361	.960	111.76
S		.749	2.760	1239	.784	101.72
K	0.12	1.054	3.885	1743	2.511	130.68
D		0.900	.319	1490	.145	111.63
L		.886	.266	1466	.111	109.86
F		.903	.328	1494	.151	111.97
S		.832	.069	1377	1.983	103.23
K	0.15	1.196	4.409	1979	2.850	132.68
D		.006	3.711	1665	.398	111.63
L		.003	.697	1659	.389	111.21
F		.010	.725	1672	.408	112.08
S		0.946	.489	1566	.255	104.99
K	0.20	1.403	5.174	2322	3.344	134.81
D		.162	4.285	1923	2.769	111.63
L		.176	.337	1946	.803	112.99
F		.174	.327	1942	.796	112.75
S		.118	.121	1849	.663	107.37
K	0.30	1.748	6.444	2892	4.165	137.11
D		.423	5.248	2355	3.392	111.63
L		.473	.431	2438	.510	115.53
F		.446	.331	2393	.445	113.42
S		.413	.209	2338	.367	110.83
K	0.40	2.036	7.507	3370	4.852	138.33
D		1.643	6.059	2720	3.916	111.63
L		.728	.371	2860	4.118	117.38
F		.667	.186	2777	.000	113.99
S		.668	.151	2761	3.976	113.34
K	0.50	2.289	8.440	3788	5.455	139.09
D		1.837	6.775	3041	4.379	111.63
L		.956	7.212	3237	.661	118.83
F		.884	6.945	3117	.489	114.45
S		.898	.998	3141	.523	115.33
K	0.60	2.517	9.279	4165	5.997	139.60
D		.013	7.421	3331	4.796	111.63
L		.164	.980	3581	5.157	120.02
F		.072	.639	3429	4.937	114.92
S		.109	.776	3490	5.026	116.99
K	0.70	2.726	10.049	4510	6.495	139.97
D		.174	8.016	3598	5.181	111.63
L		.357	.692	3901	.618	121.05
F		.242	.268	3711	.344	115.16
S		.306	.501	3815	.494	118.40

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	2.920	10.766	4,832	6.958	140.25
D		.324	8.569	3,846	5.538	111.63
L		.538	9.361	4,201	6.050	121.94
F		.405	8.866	3,979	5.730	115.52
S		.491	9.183	4,122	.935	119.64
K	0.90	3.102	11.435	5,132	7.391	140.47
D		2.465	9.089	4.080	5.874	111.63
L		.710	.993	4,485	6.458	122.73
F		.561	.443	4,238	.103	116.00
S		.666	.830	4,412	.353	120.75
K	1.0	3.273	12.069	5,417	7.800	140.65
D		2.598	9.581	4,300	6.192	111.63
L		.873	10.595	4,755	.848	123.44
F		.708	9.986	4,482	.454	116.37
S		.834	10.447	4,689	.752	121.74
K	1.5	4.024	14.838	6,660	9.590	141.18
D		3.182	11.734	5,267	7.584	111.63
L		.598	13.268	5,955	8.576	126.23
F		.345	12.334	5,536	7.972	117.36
S		.582	13.206	5,927	8.535	125.66
K	2.0	4.656	17.166	7,705	11.095	141.45
D		3.674	13.549	6,081	8.757	111.63
L		4.211	15.565	6,986	10.060	128.24
F		3.879	14.303	6,420	9.245	117.86
S		4.230	15.596	7,000	10.079	128.51
K	3.0	5.713	21.065	9,454	13.614	141.73
D		4.500	16.594	7,448	10.725	111.63
L		5.286	19.493	8,749	12.599	131.13
F		4.772	17.594	7,895	11.368	118.38
S		5.347	19.714	8,848	12.741	132.64
K	4.0	6.603	24.347	10,928	15.736	141.86
D		5.196	19.161	8,600	12.384	111.63
L		6.201	22.868	10,264	14.780	133.22
F		5.540	20.427	9,168	13.202	119.02
S		6.314	23.281	10,449	15.047	135.65
K	5.0	7.353	27.237	12,225	17.603	141.95
D		5.810	21.423	9,615	13.846	111.63
L		7.019	25.884	11,617	16.729	134.87
F		6.230	22.966	10,308	14.843	119.69
S		7.184	26.486	11,888	17.118	138.04
K	6.0	8.095	29.848	13,397	19.291	142.00
D		6.364	23.468	10,533	15.167	111.63
L		7.767	28.639	12,854	18.510	136.23
F		6.854	25.270	11,342	16.332	120.22
S		7.982	29.430	12,908	18.588	140.01

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	8.746	32.245	14,473	20.841	142.03
D		6.874	25.348	11,377	16.382	111.63
L		8.460	31.197	14,003	20.163	137.39
F		7.437	27.418	12,306	17.721	120.77
S		8.726	32.173	14,440	20.794	141.71
K	8.0	9.352	34.482	15,476	22.286	142.07
D		7.349	27.099	12,163	17.514	111.63
L		9.111	33.598	15,080	21.714	138.40
F		7.959	29.345	13,171	18.966	120.91
S		9.426	34.755	15,599	22.462	143.19
K	9.0	9.921	36.580	16,418	23.642	142.09
D		7.794	29.411	13,201	19.009	111.63
L		9.726	35.865	16,098	23.181	139.30
F		8.461	31.193	14,002	20.162	121.18
S		10.090	37.203	16,698	24.045	144.52
K	10.0	10.459	38.563	17,308	24.924	142.11
D		8.216	30.297	13,598	19.581	111.63
L		10.312	38.027	17,067	24.577	140.11
F		8.929	32.921	14,776	21.277	121.32
S		10.724	39.539	17,746	25.554	145.71
K	11.0	10.971	40.459	18,155	26.143	142.13
D		8.617	31.775	14,262	20.537	111.63
L		10.872	40.093	17,994	25.912	140.84
F		9.374	34.560	15,511	22.336	121.43
S		11.331	41.778	18,751	27.002	146.80
K	12.0	11.460	42.252	18,964	27.308	142.14
D		9.000	33.188	14,896	21.450	111.63
L		11.410	42.077	18,885	27.194	141.53
F		9.824	36.221	16,257	23.410	121.85
S		11.915	43.933	19,718	28.394	147.80
K	13.0	11.929	43.981	19,740	28.425	142.15
D		9.368	34.543	15,504	22.326	111.63
L		11.929	43.988	19,743	28.429	142.15
F		10.225	37.700	16,921	24.366	121.85
S		12.480	46.014	20,652	29.739	148.72
K	14.0	12.380	45.644	20,486	29.500	142.16
D		9.721	35.847	16,089	23.169	111.63
L		12.430	45.834	20,571	29.623	142.73
F		10.626	39.177	17,584	25.320	122.02
S		13.026	48.027	21,556	31.041	149.58
K	15.0	12.815	47.250	21,207	30.538	142.17
D		10.062	37.106	16,654	23.982	111.63
L		12.915	47.623	21,375	30.779	143.27
F		10.999	40.553	17,787	25.613	122.02
S		13.556	49.982	22,433	32.304	150.39

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	13.236	48.799	21,902	31.539	142.17
D		10.392	38.323	17,200	24.768	111.63
L		13.385	49.361	22,154	31.902	143.78
F		11.373	41.931	18,820	27.100	122.16
S		14.072	51.883	23,286	33.532	151.15
K	17.0	13.644	50.304	22,578	32.512	142.18
D		10.712	39.502	17,729	25.531	111.63
L		13.844	51.050	22,912	32.993	144.26
F		11.723	43.221	19,399	27.934	122.16
S		14.573	53.723	24,116	34.727	151.87
K	18.0	14.037	51.752	23,228	33.448	142.18
D		11.020	40.638	18,240	26.265	111.63
L		14.290	52.695	23,651	34.057	144.75
F		12.060	44.464	19,957	28.738	122.16
S		15.063	55.537	24,926	35.894	152.58
K	19.0	14.425	53.186	23,872	34.375	142.19
D		11.325	41.758	18,742	26.989	111.63
L		14.725	54.301	24,371	35.094	145.15
F		12.407	45.747	20,532	29.567	122.31
K	20.0	14.801	54.570	24,493	35.269	142.20
D		11.619	42.847	19,231	27.692	111.63
L		15.150	55.868	25,075	36.108	145.56
F		12.730	46.957	21,066	30.335	122.31
K	21.0	15.166	55.918	25,098	36.141	142.20
D		11.906	43.897	19,703	28.371	111.63
F		13.059	48.148	21,611	31.119	122.44
D	22.0	12.186	44.930	20,166	29.039	111.63
F		13.367	49.282	22,119	31.856	122.44
D	23.0	12.460	45.940	20,619	29.691	111.63
F		13.683	50.449	22,643	32.620	122.59
D	24.0	12.728	46.929	21,063	30.330	111.63
F		13.994	51.596	23,157	33.347	122.73
D	25.0	12.990	47.896	21,497	30.956	111.63
F		14.282	52.659	23,629	34.026	122.73
D	30.0	14.230	52.467	23,549	33.910	111.63
F		15.701	57.888	25,982	37.414	123.17
D	40.0	16.432	60.584	27,192	39.157	111.63

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.002	4.283	1922	2.768	131.13
D		0.854	3.651	1639	.359	111.78
L		.843	.603	1617	.329	110.33
F		.862	.686	1654	.382	112.86
S		.782	.344	1500	.161	102.39
K	0.12	1.112	4.756	2135	3.146	132.94
D		0.935	3.999	1795	2.585	111.78
L		.932	.987	1790	.577	111.45
F		.946	4.046	1816	.615	113.08
S		.869	3.716	1668	.402	103.86
K	0.15	1.262	5.395	2422	3.487	134.88
D		.046	4.471	2007	2.890	111.78
L		.055	.513	2026	.917	112.82
F		.059	.532	2034	.929	113.31
S		0.989	.228	1897	.732	105.69
K	0.20	1.479	6.326	2839	4.088	136.96
D		.207	5.163	2318	3.337	111.78
L		.238	.294	2376	.422	114.62
F		.230	.260	2361	.399	113.88
S		.167	4.992	2241	.226	108.08
K	0.30	1.884	8.057	3616	5.207	139.18
D		.479	6.323	2838	4.087	111.78
L		.551	.630	2976	.285	117.21
F		.520	.501	2918	.202	114.92
S		.476	.311	2832	.079	111.56
K	0.40	2.144	9.168	4115	5.926	140.36
D		1.708	7.301	3277	4.719	111.78
L		.819	.778	3491	5.027	119.08
F		.761	.530	3380	4.867	115.28
S		.743	.452	3345	.817	114.09
K	0.50	2.410	10.304	4625	6.659	141.09
D		1.909	8.163	3664	5.276	111.78
L		2.059	.803	3951	.690	120.55
F		1.977	.454	3794	.464	115.76
S		.983	.478	3805	.480	116.09
K	0.60	2.649	11.327	5084	7.321	141.59
D		.091	8.942	4014	5.780	111.78
L		.279	9.751	4372	6.296	121.76
F		.173	.290	4169	.004	116.12
S		.203	.421	4228	.089	117.76
K	0.70	2.868	12.265	5505	7.927	141.94
D		.259	9.659	4335	6.243	111.78
L		.482	10.611	4763	.858	122.80
F		.356	.076	4533	.527	116.61
S		.409	.298	4622	.658	119.19

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	3.072	13.136	5,896	8.490	142.21
D		2.415	10.325	4,634	6.674	111.78
L		.672	11.427	5,129	7.386	123.70
F		.530	10.818	4,855	6.992	117.11
S		.602	11.125	4,993	7.190	120.43
K	0.90	3.263	13.954	6,263	9.019	142.43
D		2.561	10.951	4,916	7.078	111.78
L		.853	12.199	5,475	.884	124.51
F		.689	11.498	5,161	.431	117.36
S		.785	.909	5,345	.697	121.55
K	1.0	3.444	14.727	6,610	9.518	142.60
D		2.700	11.544	5,181	7.461	111.78
L		3.025	12.933	5,805	8.359	125.23
F		2.841	.146	5,452	7.850	117.61
S		.960	.656	5,681	8.180	122.55
K	1.5	4.234	18.103	8,125	11.700	143.12
D		3.307	14.139	6,346	9.138	111.78
L		.788	16.197	7,270	10.469	128.05
F		.506	14.989	6,728	9.688	118.51
S		.742	16.036	7,198	10.364	126.49
K	2.0	4.897	20.941	9,399	13.534	143.38
D		3.818	16.326	7,328	10.552	111.78
L		4.444	19.001	8,528	12.281	130.10
F		.070	17.404	7,811	11.248	119.16
S		.419	18.894	8,480	12.211	129.36
K	3.0	6.009	25.694	11,532	16.606	143.64
D		4.676	19.995	8,975	12.923	111.78
L		5.565	23.797	10,681	15.380	133.03
F		.013	21.433	9,620	13.852	119.82
S		.586	23.884	10,720	15.436	133.52
K	4.0	6.945	29.697	13,329	19.195	143.78
D		5.400	23.089	10,363	14.922	111.78
L		6.529	27.916	12,530	18.043	135.15
F		5.821	24.883	11,168	16.082	120.49
S		6.596	28.205	12,660	18.229	136.55
K	5.0	7.769	33.220	14,910	21.470	143.85
D		6.037	25.814	11,586	16.684	111.78
L		7.390	31.597	14,182	20.422	136.82
F		6.530	27.922	12,532	18.046	120.91
S		7.504	32.089	14,402	20.739	138.95
K	6.0	8.514	36.404	16,339	23.528	143.90
D		6.614	28.281	12,693	18.278	111.78
L		8.176	34.961	15,691	22.596	138.20
F		7.186	30.726	13,791	19.859	121.46
S		8.338	35.655	16,003	23.044	140.94

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	9.198	39.332	17,694	25.479	143.94
D		7.143	30.543	13,708	19.740	111.78
L		8.907	38.084	17,093	24.614	139.38
F		7.788	33.303	14,947	21.524	121.88
S		9.032	38.977	17,494	25.191	142.64
K	8.0	9.835	42.055	18,876	27.181	143.97
D		7.636	32.652	14,655	21.103	111.78
L		9.592	41.015	18,409	26.508	140.41
F		8.345	35.685	16,016	23.063	122.16
S		9.847	42.105	18,898	27.213	144.14
K	9.0	10.434	44.614	20,024	28.834	144.00
D		8.099	34.633	15,544	22.383	111.78
L		10.240	43.784	19,652	28.298	141.32
F		8.882	37.982	17,047	24.548	122.59
S		10.540	45.071	20,229	29.129	145.47
K	10.0	10.999	47.033	21,110	30.398	144.01
D		8.557	36.506	16,385	23.594	111.78
L		10.856	46.422	20,835	30.002	142.14
F		9.374	40.083	17,991	25.906	122.73
S		11.202	47.902	21,500	30.959	146.67
K	11.0	11.538	49.334	22,143	31.885	144.03
D		8.954	38.200	17,185	24.746	111.78
L		11.446	48.943	21,967	31.632	142.88
F		9.855	42.139	18,913	27.235	123.02
S		11.836	50.614	22,717	32.712	147.76
K	12.0	12.051	51.531	23,129	33.305	144.04
D		9.352	39.991	17,949	25.846	111.78
L		12.012	51.365	23,054	33.198	143.58
F		10.293	44.012	19,754	28.445	123.02
S		12.447	53.225	23,889	34.400	148.76
K	13.0	12.544	53.639	24,075	34.667	144.05
D		9.734	41.623	18,682	26.901	111.78
L		12.558	53.698	24,101	34.677	144.21
F		10.725	45.863	20,584	29.642	123.17
S		13.037	55.745	25,020	36.029	149.70
K	14.0	13.019	55.667	24,985	35.979	144.06
D		10.102	43.194	19,387	27.917	111.78
F		13.085	55.952	25,113	36.163	144.80
L		11.131	47.594	21,361	30.760	123.17
S		13.607	58.186	26,116	37.606	150.58
K	15.0	13.477	57.626	25,864	37.244	144.07
D		10.456	44.712	20,068	28.897	111.78
L		13.596	58.136	26,093	37.574	145.34
F		11.522	49.265	22,112	31.841	123.17
S		14.161	60.554	27,116	39.137	151.39

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	13.919	59.517	26,775	38.555	144.07
D		10.799	46.177	20,725	29.845	111.78
L		14.092	60.258	27,045	38.945	145.86
F		11.899	50.881	22,837	32.884	123.17
S		14.700	62.855	28,211	40.624	152.15
K	17.0	14.347	61.349	27,535	39.651	144.08
D		11.131	47.598	21,363	30.763	111.78
L		14.574	62.319	27,971	40.278	146.35
F		12.265	52.446	23,539	33.896	123.17
S		15.224	65.097	29,217	42.073	152.87
K	18.0	14.764	63.132	28,335	40.803	144.08
D		11.454	48.980	21,983	31.656	111.78
L		15.044	64.328	28,872	41.575	146.81
F		12.621	53.967	24,222	34.880	123.17
K	19.0	15.169	64.865	29,113	41.923	144.09
D		11.768	50.321	22,585	32.523	111.78
F		12.967	55.446	24,886	35.835	123.17
D	20.0	12.074	51.628	23,172	33.368	111.78
F		13.304	56.887	25,532	36.766	123.17
D	21.0	12.372	52.902	23,744	34.191	111.78
F		13.648	58.358	26,193	37.709	123.31
D	22.0	12.663	54.148	24,303	34.996	111.78
F		13.986	59.804	26,842	38.652	123.46
D	23.0	12.948	55.364	24,849	35.783	111.78
F		14.334	61.293	27,510	39.614	123.75
D	24.0	13.226	56.556	25,384	36.806	111.78
F		14.660	62.687	28,136	40.515	123.90
D	25.0	13.499	57.722	25,907	37.306	111.78
F		14.980	64.055	28,750	41.399	124.04
D	30.0	14.787	63.231	28,380	40.867	111.78
F		16.469	70.422	31,608	45.515	124.49
D	40.0	17.075	73.013	32,770	47.189	111.78

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.054	5.173	2322	3.343	133.29
D		0.885	4.343	1949	2.807	111.91
L		.884	.340	1948	.805	111.82
F		.901	.424	1986	.859	113.99
S		.810	3.976	1785	.570	102.45
K	0.12	1.170	5.741	2577	3.711	135.05
D		0.969	4.757	2135	.075	111.91
L		.978	.802	2155	.103	112.95
F		.989	.969	2230	.211	114.22
S		.900	.418	1983	2.855	103.92
K	0.15	1.326	6.509	2922	4.207	136.94
D		.084	5.319	2387	3.438	111.91
L		.107	.435	2439	.513	114.34
F		.107	.434	2439	.512	114.34
S		.024	.026	2256	.248	105.74
K	0.20	1.553	7.625	3423	4.928	138.94
D		.251	6.142	2757	3.970	111.91
L		.299	.376	2862	4.121	116.17
F		.285	.307	2831	.077	114.92
S		.209	5.935	2664	3.836	108.14
K	0.30	1.932	9.484	4257	6.130	141.10
D		.532	7.522	3376	4.862	111.91
L		.627	.985	3584	5.161	118.79
F		.585	.781	3492	.029	115.76
S		.528	.502	3368	4.849	111.62
K	0.40	2.249	11.040	4955	7.135	142.24
D		1.769	8.686	3898	5.744	111.91
L		.908	9.367	4204	6.054	120.68
F		.844	.051	4062	5.850	116.61
S		.805	8.864	3977	.726	114.15
K	0.50	2.527	12.404	5567	8.017	142.94
D		1.978	9.711	4359	6.279	111.91
L		2.160	10.602	4758	.852	122.17
F		.068	.151	4556	.561	116.98
S		.054	.080	4524	.515	116.16
K	0.60	2.775	13.622	6114	8.804	143.30
D		.167	10.638	4775	6.876	111.91
L		.390	11.731	5265	7.582	123.40
F		.278	.181	5018	.226	117.61
S		.282	.174	5027	.239	117.82
K	0.70	3.007	14.761	6625	9.540	143.77
D		2.341	11.490	5157	7.426	111.91
L		.603	12.778	5735	8.259	124.46
F		.471	.128	5443	7.838	118.12
S		.494	.242	5495	.912	119.23

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	3.221	15.808	7,095	10.217	144.03
D		2.502	12.283	5,513	7.939	111.91
L		.804	13.761	6,177	8.894	125.38
F		.653	13.022	5,845	8.416	118.63
S		.692	13.214	5,931	8.541	120.39
K	0.90	3.421	16.792	7,536	10.853	144.23
D		2.654	13.028	5,848	8.421	111.91
L		.993	14.691	6,594	9.495	126.19
F		.817	13.827	6,206	8.936	118.77
S		.884	14.159	6,355	9.151	121.62
K	1.0	3.610	17.721	7,953	11.453	144.40
D		2.798	13.733	6,164	8.876	111.91
L		3.173	15.540	6,990	10.066	126.92
F		2.979	14.623	6,563	9.451	119.16
S		3.065	15.047	6,754	9.725	122.62
K	1.5	4.437	21.778	9,775	14.076	144.90
D		3.427	16.820	7,549	10.871	111.91
L		.974	19.510	8,755	12.607	129.78
F		.681	18.070	8,110	11.679	120.22
S		.875	19.022	8,538	12.294	126.56
K	2.0	5.132	25.191	11,306	16.281	145.15
D		3.957	19.420	8,717	12.553	111.91
L		4.662	22.883	10,271	14.790	131.85
F		.275	20.984	9,418	13.559	120.91
S		.576	22.463	10,082	14.518	129.43
K	3.0	6.296	30.906	13,872	19.975	145.40
D		4.846	23.787	10,676	15.374	111.91
L		5.838	28.658	12,863	18.522	134.83
F		.258	25.811	11,585	16.682	121.43
S		.785	28.396	12,745	18.353	133.59
K	4.0	7.277	35.719	16,032	23.086	145.53
D		5.596	27.467	12,328	17.752	111.91
L		6.849	33.619	15,089	21.729	136.98
F		.115	30.018	13,473	19.401	122.30
S		.831	33.534	15,051	21.673	136.63
K	5.0	8.140	39.957	17,934	25.825	145.61
D		6.256	30.710	13,783	19.848	111.91
L		7.752	38.050	17,079	24.594	138.67
F		6.853	33.640	15,098	21.742	122.59
S		7.772	38.150	17,123	24.656	139.02
K	6.0	8.920	43.785	19,652	28.298	145.66
D		6.853	33.640	15,099	21.742	111.91
L		8.577	42.104	18,897	27.212	140.07
F		7.543	37.024	16,617	23.929	123.17
S		8.636	42.390	19,026	27.397	141.02

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	9.637	47.305	21,232	30.574	145.70
D		7.402	36.335	16,308	23.484	111.91
L		9.344	45.865	20,585	29.643	141.26
F		8.166	40.085	17,991	25.907	123.46
S		9.440	46.340	20,799	29.950	142.72
K	8.0	10.304	50.581	22,702	32.690	145.72
D		7.913	38.844	17,434	25.106	111.91
L		10.062	49.393	22,169	31.924	142.30
F		8.761	43.006	19,303	27.795	123.90
S		10.198	50.059	22,468	32.353	144.22
K	9.0	10.931	53.657	24,083	34.680	145.75
D		8.413	41.295	18,534	26.690	111.91
L		10.742	52.729	23,666	34.079	143.23
F		9.315	45.722	20,522	29.551	124.19
S		10.916	53.584	24,050	34.631	145.54
K	10.0	11.524	56.567	25,388	36.560	145.76
D		8.847	43.429	19,492	28.133	111.91
L		11.389	55.905	25,091	36.132	144.06
F		9.854	48.371	21,710	31.262	124.64
S		11.602	56.951	25,561	36.808	146.75
K	11.0	12.087	59.334	26,631	38.348	145.78
D		9.279	45.549	20,443	29.439	111.91
L		12.007	58.941	26,455	38.094	144.81
F		10.348	50.794	22,798	32.829	124.80
S		12.259	60.176	27,009	38.892	147.84
K	12.0	12.626	61.977	27,817	40.056	145.79
D		9.692	47.574	21,353	30.747	111.91
L		12.602	61.858	27,764	39.908	145.5'
F		10.808	53.052	23,811	34.288	124.80
S		12.891	63.281	28,337	40.899	148.86
K	13.0	13.142	64.151	28,954	41.694	145.80
D		10.087	49.517	22,224	32.003	111.91
L		13.174	64.668	29,025	41.795	146.15
F		11.262	55.284	24,813	35.731	124.94
S		13.500	66.269	29,744	42.830	149.77
K	14.0	13.639	66.950	30,049	43.270	145.81
D		10.468	51.385	23,063	33.211	111.91
L		13.727	67.383	30,243	43.550	146.75
F		11.688	57.371	25,750	37.079	124.94
S		14.093	69.178	31,049	44.711	150.67
K	15.0	14.119	69.305	31,106	44.792	145.81
D		10.835	53.190	23,873	34.377	111.91
L		14.263	70.013	31,424	45.250	147.30
F		12.113	59.458	26,686	38.428	125.10
S		14.666	71.993	32,016	46.530	151.47

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	14.582	71.578	32,126	46.262	145.82
D		11.191	54.934	24,656	35.504	111.91
L		14.783	72.567	32,570	46.901	147.83
F		12.510	61.407	27,561	39.688	125.10
S		15.224	74.733	33,542	48.300	152.24
K	17.0	15.031	73.784	33,116	47.687	145.82
D		11.535	56.624	25,414	36.596	111.91
L		15.289	75.050	33,684	48.505	148.33
F		12.911	63.374	28,444	40.959	125.25
K	18.0	15.468	75.728	34,079	49.073	145.83
D		11.870	58.267	26,152	37.658	111.91
L		15.782	77.469	34,771	50.069	148.79
F		13.285	65.212	29,269	42.147	125.25
K	19.0	15.892	78.012	35,014	50.420	145.84
D		12.195	59.863	26,868	38.690	111.91
L		16.262	79.829	35,829	51.595	149.23
F		13.666	67.082	30,108	43.355	125.41
K	20.0	16.306	80.041	35,924	51.731	145.84
D		12.512	61.419	27,566	39.695	111.91
L		16.732	82.133	36,864	53.083	149.66
F		14.021	68.823	30,890	44.482	125.41
D	21.0	12.821	62.933	28,246	40.674	111.91
F		14.368	70.528	31,655	45.583	125.41
D	22.0	13.123	64.415	28,912	41.632	111.91
F		14.723	72.270	32,437	46.709	125.56
D	23.0	13.414	65.847	29,554	42.558	111.91
F		15.050	73.860	33,150	47.737	125.56
D	24.0	13.706	67.281	30,198	43.484	111.91
D	25.0	13.989	68.667	30,820	44.380	111.91
D	30.0	15.324	75.221	33,761	48.616	111.91

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.106	6.176	2772	3.992	135.44
D		0.915	5.108	2293	.302	112.62
L		.924	.164	2318	.337	113.23
F		.940	.252	2357	.394	115.16
S		.844	4.716	2117	.048	103.41
K	0.12	1.227	6.851	3075	4.428	137.15
D		.002	5.596	2517	3.625	112.02
L		.023	.714	2564	.684	114.37
F		.031	.759	2585	.722	115.28
S		0.938	.204	2336	.363	104.89
K	0.15	1.390	7.762	3484	5.017	138.98
D		.120	6.257	2808	4.044	112.02
L		.158	.467	2902	.180	115.78
F		.155	.450	2895	.169	115.52
S		.067	5.961	2676	3.853	106.74
K	0.20	1.627	9.088	4079	5.874	140.92
D		.294	7.225	3243	4.669	112.02
L		.358	.586	3405	.903	117.63
F		.341	.489	3361	.840	116.04
S		.261	.040	3160	.550	109.16
K	0.30	2.022	11.295	5070	7.300	143.01
D		1.584	8.848	3971	5.719	112.02
L		.701	9.499	4264	6.140	120.28
F		.654	.240	4147	5.972	116.98
S		.593	8.899	3994	.752	112.67
K	0.40	2.353	13.142	5899	8.494	144.11
D		1.829	10.216	4586	6.603	112.02
L		.996	11.145	5002	7.203	122.20
F		.916	10.703	4804	6.918	117.36
S		.882	.509	4717	.653	115.23
K	0.50	2.643	14.763	6626	9.764	144.78
D		.045	11.423	5127	7.383	112.02
L		.259	12.615	5662	8.153	123.71
F		.154	.031	5400	7.776	117.99
S		.141	11.956	5366	.727	117.25
K	0.60	2.902	16.212	7276	10.476	145.12
D		.241	12.513	5616	8.087	112.02
L		.499	13.958	6265	9.022	124.96
F		.373	.251	5948	8.565	118.63
S		.376	.267	5955	.575	118.77
K	0.70	3.145	17.563	7883	11.352	145.58
D		2.420	13.515	6066	8.735	112.02
L		.722	15.205	6825	9.827	126.02
F		.577	14.392	6460	.302	119.29
S		.600	.523	6518	.386	120.37

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge. Cu. Feet per Sec.	Discharge. U. S. Gallons per Min.	Discharge. Million Gallons per 24 Hours.	c
K	0.80	3.368	18.809	8,462	12.156	145.83
D		2.587	14.449	6,485	9.339	112.02
L		.932	16.375	7,350	10.583	126.95
F		.764	15.437	6,929	9.978	119.69
S		.809	15.689	7,041	10.139	121.63
K	0.90	3.577	19.977	8,966	12.911	146.03
D		2.744	15.325	6,878	9.905	112.02
L		3.130	17.480	7,846	11.298	127.77
F		2.934	16.388	7,356	10.592	119.79
S		3.007	16.793	7,537	.854	122.75
K	1.0	3.774	21.080	9,462	13.624	146.19
D		2.892	16.154	7.251	10.440	112.02
L		3.318	18.533	8,318	11.978	128.52
F		.104	17.338	7,782	.206	120.23
S		.196	17.809	8,029	.535	123.77
K	1.5	4.638	25.903	11,626	16.741	146.67
D		3.543	19.785	8,880	12.787	112.02
L		4.156	23.210	10,417	15.001	131.42
F		3.832	21.403	9,606	13.833	121.18
S		4.040	22.562	10,126	14.582	127.75
K	2.0	5.364	29.960	13,446	19.363	146.91
D		4.091	22.846	10,253	14.765	112.02
L		.875	27.292	12,221	17.598	133.51
F		.449	24.850	11,153	16.061	121.85
S		.771	26.644	11,958	17.220	130.65
K	3.0	6.581	36.753	16,496	23.754	147.15
D		5.010	27.980	12,558	18.083	112.02
L		6.106	34.100	15,305	22.039	136.52
F		5.482	30.619	13,743	19.563	122.59
S		6.031	33.681	15,117	21.769	134.85
K	4.0	7.605	42.475	19,064	27.452	147.28
D		5.785	32.308	14,501	20.881	112.02
L		7.163	40.004	17,954	25.854	138.70
F		6.368	35.564	15,962	22.985	123.31
S		7.122	39.774	17,852	25.706	137.91
K	5.0	8.507	47.509	21,323	30.705	147.34
D		6.468	35.956	16,212	23.346	112.02
L		8.107	45.278	20,322	29.263	140.41
F		7.153	39.952	17,932	25.822	123.90
S		8.102	45.250	20,310	29.246	140.33
K	6.0	9.322	52.065	23,368	33.650	147.40
D		7.085	39.570	17,760	25.574	112.02
L		8.970	50.099	22,487	32.380	141.83
F		7.845	43.817	19,666	28.319	124.04
S		9.003	50.279	22,567	32.496	142.34

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	10.071	56.251	25,247	36.355	147.44
D		7.653	42.740	19,183	27.623	112.02
L		9.772	54.574	24,595	35.272	143.04
F		8.484	47.384	21,267	30.625	124.20
S		9.840	54.960	24,667	35.521	144.05
K	8.0	10.768	60.145	26,994	38.872	147.46
D		8.181	45.692	20,507	29.531	112.02
L		10.523	58.773	26,379	37.986	144.09
F		9.081	50.718	22,764	32.779	124.34
S		10.631	59.376	26,650	38.375	145.57
K	9.0	11.423	63.803	28,636	41.236	147.48
D		8.677	48.463	21,751	31.322	112.02
L		11.234	62.742	28,160	40.551	145.03
F		9.655	53.923	24,202	34.851	124.64
S		11.380	63.560	28,527	41.079	146.92
K	10.0	12.043	67.262	30,189	43.472	147.50
D		9.147	51.084	22,928	33.016	112.02
L		11.910	66.521	29,857	42.993	145.87
F		10.227	57.116	25,635	36.915	125.25
S		12.095	67.551	30,319	43.659	148.13
K	11.0	12.632	70.552	31,665	45.598	147.51
D		9.593	53.578	24,047	34.628	112.02
L		12.557	70.134	31,478	45.328	146.64
F		10.752	60.051	26,953	38.812	125.56
S		12.779	71.376	32,035	46.131	149.23
K	12.0	13.194	73.693	33,075	47.628	147.52
D		10.019	55.960	25,116	36.167	112.02
L		13.179	73.605	33,036	47.572	147.35
F		11.244	62.799	28,186	40.587	125.71
S		13.439	75.059	33,689	48.511	150.25
K	13.0	13.734	76.708	34,428	49.577	147.53
D		10.428	58.245	26,142	37.648	112.02
L		13.777	76.948	34,536	49.732	148.00
F		11.718	65.443	29,373	42.296	125.87
S		14.075	78.613	35,283	50.808	151.20
K	14.0	14.253	79.607	35,730	51.450	147.54
D		10.822	60.443	27,128	39.065	112.02
L		14.356	80.179	35,986	51.820	148.60
F		12.175	67.996	30,518	43.946	126.02
S		14.692	82.054	36,828	53.032	152.08
K	15.0	14.755	82.408	36,987	53.261	147.55
D		11.202	62.566	28,081	40.437	112.02
L		14.916	83.309	37,391	53.843	149.16
F		12.602	70.383	31,590	45.489	126.02
S		15.289	85.392	38,327	55.190	152.89

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	16.0	15.239	85.112	38,200	55.008	147.55
D		11.569	64.617	29,002	41.762	112.02
L		15.460	86.547	38,755	55.807	149.70
F		13.045	72.859	32,701	47.089	126.02
D	17.0	11.925	66.605	29,894	43.047	112.02
F		13.432	75.021	33,671	48.487	126.18
D	18.0	12.271	68.537	30,761	44.296	112.02
F		13.839	77.293	34,691	49.955	126.33
D	19.0	12.607	70.415	31,604	45.510	112.02
F		14.219	79.411	35,642	51.324	126.33
D	20.0	12.935	72.245	32,425	46.692	112.02
F		14.606	81.574	36,613	52.722	126.49
D	21.0	13.285	74.198	33,302	47.955	112.02
F		15.000	83.778	37,602	54.146	126.49
D	22.0	13.598	75.945	34,086	49.084	112.02
D	23.0	13.903	77.651	34,852	50.187	112.02
D	24.0	14.202	79.323	35,603	51.266	112.02
D	25.0	14.495	80.958	36,420	52.431	112.02
D	30.0	15.879	88.685	39,804	57.450	112.02

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.155	7.380	3267	4.705	137.18
D		0.946	5.950	2670	3.845	112.12
L		.964	6.080	2729	929	114.58
F		.970	.117	2745	953	115.28
S		.871	5.492	2465	549	103.49
K	0.12	1.280	8.071	3622	5.216	138.84
D		.034	6.522	2927	4.215	112.12
L		.067	.712	3019	.348	116.00
F		.074	.771	3039	.376	116.49
S		0.964	.080	2729	3.930	104.60
K	0.15	1.449	9.139	4102	5.906	140.62
D		.156	7.287	3270	4.710	112.12
L		.208	.614	3417	.921	117.16
F		.203	.586	3405	.903	116.74
S		.101	6.942	3116	.487	106.81
K	0.20	1.696	10.694	4800	6.912	142.51
D		.334	8.414	3776	5.438	112.12
L		.417	.932	4009	.773	119.03
F		.398	.816	3957	.698	117.48
S		.300	.198	3679	.298	109.24
K	0.30	2.107	13.283	5976	8.605	144.53
D		1.634	10.305	4625	6.660	112.12
L		.774	11.186	5021	7.230	121.71
F		.722	10.856	4872	.016	118.12
S		.644	.363	4651	6.698	112.76
K	0.40	2.451	15.451	6935	9.986	145.60
D		1.887	11.899	5341	7.690	112.12
L		2.081	13.123	5890	8.481	123.65
F		.001	12.617	5663	.155	118.90
S		1.941	.238	5493	7.909	115.32
K	0.50	2.752	17.353	7789	11.216	146.25
D		.110	13.303	5971	8.598	112.12
L		.356	14.853	6667	9.600	125.18
F		.247	.169	6360	.158	119.42
S		.208	13.923	6249	8.998	117.34
K	0.60	3.024	19.068	8558	12.324	146.70
D		2.311	14.573	6541	9.419	112.12
L		.606	16.434	7376	10.622	126.44
F		.470	15.573	6990	.065	119.79
S		.453	.468	6942	9.997	119.01
K	0.70	3.274	20.641	9264	13.340	147.03
D		2.497	15.741	7065	10.173	112.12
L		.839	17.902	8035	11.570	127.52
F		.680	16.897	7584	10.920	120.08
S		.682	.911	7590	.930	120.46

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	3.514	22.153	9,943	14.317	147.27
D		2.669	16.828	7,553	10.876	112.12
L		3.058	19.280	8,653	12.489	128.46
F		2.881	18.166	8,154	11.741	121.04
S		.898	.269	8,200	.807	121.72
K	0.90	3.723	23.474	10,536	15.172	147.46
D		2.831	17.848	8,011	11.536	112.12
L		3.264	20.582	9,259	13.333	129.29
F		.060	19.291	8,658	12.467	121.18
S		.102	.555	8,777	.639	122.85
K	1.0	3.929	24.769	11,117	16.009	147.62
D		2.984	18.814	8,444	12.160	112.12
L		3.461	21.821	9,794	14.103	130.05
F		.236	20.404	9,158	13.187	121.60
S		.296	.784	9,328	.432	123.86
K	1.5	4.827	30.432	13,659	19.669	148.08
D		3.655	23.042	10,342	14.892	112.12
L		4.334	27.328	12,265	17.663	132.98
F		3.996	25.193	11,307	16.282	122.59
S		4.167	26.273	11,792	.980	127.84
K	2.0	5.582	35.195	15,797	22.747	148.31
D		4.220	26.608	11,942	17.196	112.12
L		5.085	32.060	14,389	20.720	135.10
F		4.636	29.227	13,118	18.890	123.17
S		.921	31.026	13,925	20.053	130.74
K	3.0	6.848	43.174	19,378	28.554	148.55
D		5.168	32.587	14,626	21.061	112.12
L		6.368	40.150	18,020	25.949	138.15
F		5.718	36.051	16,181	23.300	124.04
S		6.220	39.220	17,603	25.348	134.95
K	4.0	7.913	49.893	22,394	32.246	148.67
D		5.968	37.628	16,888	24.319	112.12
L		7.470	47.101	21,140	30.441	140.35
F		6.634	41.829	18,774	27.035	124.64
S		7.346	46.317	20,788	29.935	138.01
K	5.0	8.851	55.809	25,049	36.069	148.74
D		6.672	42.070	18,882	27.190	112.12
L		8.455	53.311	23,927	34.455	142.08
F		7.444	46.937	21,067	30.336	125.10
S		8.357	52.693	23,650	34.056	140.44
K	6.0	9.699	61.155	27,448	39.525	148.79
D		7.309	46.085	20,684	29.786	112.12
L		9.356	58.988	26,475	38.124	143.51
F		8.185	51.606	23,162	33.353	125.56
S		9.286	58.549	26,279	37.841	142.45

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	10.479	66.071	29,655	42.702	148.83
D		7.895	49.777	22,341	32.171	112.12
L		10.191	64.257	28,841	41.529	144.74
F		8.862	55.878	25,080	36.114	125.87
S		10.152	64.006	28,728	41.368	144.17
K	8.0	11.205	70.645	31,708	45.658	148.85
D		8.440	53.215	23,884	34.393	112.12
L		10.975	69.200	31,059	44.725	145.80
F		9.486	59.810	26,844	38.655	126.02
S		10.966	69.142	31,033	44.687	145.68
K	9.0	11.886	74.939	33,635	48.434	148.87
D		8.952	56.442	25,333	36.479	112.12
L		11.716	73.873	33,156	47.635	146.75
F		10.086	63.594	28,543	41.102	126.33
S		11.738	74.013	33,219	47.835	147.03
K	10.0	12.530	79.002	35,459	51.060	148.89
D		9.436	59.495	26,703	38.452	112.12
L		12.422	78.323	35,153	50.621	147.61
F		10.658	67.202	30,162	43.433	126.65
S		12.476	78.661	35,306	50.839	148.24
K	11.0	13.143	82.867	37,193	53.557	148.90
D		9.897	62.400	28,007	40.329	112.12
L		13.097	82.577	37,063	53.370	148.38
F		11.193	70.570	31,674	45.610	126.81
S		13.182	83.117	37,305	53.719	149.35
K	12.0	13.728	86.557	38,849	55.942	148.91
D		10.336	65.174	29,252	42.122	112.12
L		13.745	86.664	38,897	56.012	149.09
F		11.705	73.801	33,123	47.698	126.97
S		13.862	87.404	39,229	56.490	150.37
K	13.0	14.289	90.095	40,437	58.229	148.92
D		10.758	67.834	30,446	43.842	112.12
L		14.369	90.600	40,664	58.555	149.75
F		12.198	76.910	34,519	49.707	127.13
S		14.519	91.542	41,087	59.165	151.31
K	14.0	14.830	93.502	41,966	60.431	148.93
D		11.164	70.394	31,595	45.496	112.12
L		14.973	94.404	42,371	61.014	150.36
F		12.658	79.812	35,822	51.583	127.13
S		15.154	95.559	42,885	61.755	152.19
K	15.0	15.351	96.790	43,442	62.556	148.94
D		11.557	72.867	32,704	47.094	112.12
L		15.557	98.089	44,025	63.696	150.93
F		13.120	82.726	37,127	53.463	127.29

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
D	16.0	11.936	75.256	33,777	48.638	112.12
F		13.550	85.432	38,344	55.215	127.29
D	17.0	12.303	77.571	34,816	50.135	112.12
F		13.984	88.170	39,574	56.977	127.45
D	18.0	12.660	79.821	35,826	51.589	112.12
F		14.408	90.843	40,773	58.712	127.61
D	19.0	13.007	82.009	36,808	53.003	112.12
F		14.821	93.450	41,943	60.398	127.77
D	20.0	13.345	84.140	37,764	54.380	112.12
F		15.226	96.002	43,088	62.047	127.93
D	21.0	13.674	86.215	38,696	55.721	112.12
D	22.0	13.993	88.225	39,598	57.020	112.12
D	23.0	14.310	90.228	40,497	58.315	112.12
D	24.0	14.618	92.170	41,369	59.570	112.12
D	25.0	14.920	94.070	42,221	60.798	112.12
D	30.0	16.344	103.05	46,251	66.601	112.12

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.203	8.507	3,818	5.498	138.06
D		0.972	6.869	3,083	4.429	112.21
L		1.003	7.091	3,183	.584	115.85
F		.022	.223	3,242	.668	117.99
S		0.900	6.362	2,855	.112	103.92
K	0.12	1.334	9.427	4,231	6.093	140.58
D		.065	7.525	3,377	4.863	112.21
L		.110	.847	3,522	5.072	117.02
F		.119	.912	3,551	.114	117.99
S		.000	.069	3,173	4.569	105.41
K	0.15	1.509	10.669	4,789	6.895	142.30
D		.190	8.413	3,776	5.437	112.21
L		.256	.882	3,986	.740	118.46
F		.256	.875	3,984	.736	118.38
S		.138	.042	3,609	.197	107.26
K	0.20	1.765	12.478	5,600	8.064	144.13
D		.374	9.715	4,360	6.279	112.21
L		.474	10.419	4,676	.734	120.35
F		.463	.339	4,640	.682	119.42
S		.344	9.497	4,262	.132	109.70
K	0.30	2.191	15.490	6,952	10.011	146.09
D		1.683	11.897	5,340	7.690	112.21
L		.846	13.048	5,857	8.434	123.06
F		.801	12.733	5,715	.229	120.09
S		.698	.004	5,388	7.759	112.99
K	0.40	2.548	18.012	8,084	11.642	147.12
D		1.944	13.738	6,166	8.879	112.21
L		2.166	15.307	6,870	9.893	125.03
F		.089	14.769	6,629	.545	120.63
S		.006	.176	6,363	.163	115.79
K	0.50	2.861	20.226	9,078	13.072	147.75
D		.173	15.360	6,894	9.928	112.21
L		.451	17.325	7,776	11.197	126.57
F		.352	16.626	7,462	10.745	121.46
S		.283	.137	7,243	.429	117.89
K	0.60	3.144	22.220	9,973	14.361	148.19
D		2.380	16.826	7,552	10.874	112.21
L		.712	19.170	8,604	12.390	127.85
F		.589	18.297	8,212	11.825	122.02
S		.535	17.921	8,043	.566	119.52
K	0.70	3.403	24.151	10,795	15.544	148.50
D		2.571	18.174	8,157	11.746	112.21
L		.954	20.882	9,373	13.497	128.94
F		.812	19.878	8,922	12.847	122.73
S		.772	.591	8,793	.662	120.96

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	3.643	25.752	11,558	16.644	148.73
D		2.749	19.429	8,720	12.557	112.21
L		3.182	22.489	10,094	14.535	129.89
F		.017	21.326	9,572	13.783	123.17
S		2.994	.163	9,499	.678	122.23
K	0.90	3.869	27.348	12,275	17.675	148.92
D		2.915	20.607	9,249	13.318	112.21
L		3.397	24.008	10,776	15.517	130.73
F		.204	22.645	10,164	14.636	123.31
S		.205	.653	10,168	.641	123.36
K	1.0	4.082	28.857	12,952	18.651	149.07
D		3.073	21.722	9,747	14.039	112.21
L		.601	25.454	11,424	16.451	131.49
F		.389	23.956	10,752	15.483	123.75
S		.407	24.082	10,809	.564	124.40
K	1.5	5.015	35.450	15,911	22.912	149.52
D		3.764	26.604	11,941	17.195	112.21
L		4.510	31.878	14,307	20.603	134.45
F		.181	29.552	12,267	19.100	124.64
S		.306	30.435	13,660	.671	128.37
K	2.0	5.800	40.995	18,400	26.495	149.74
D		4.346	30.720	13,788	19.854	112.21
L		5.291	37.396	16,784	24.169	136.60
F		4.845	34.248	15,371	22.135	125.10
S		5.085	35.942	16,132	23.230	131.29
K	3.0	7.114	50.285	22,570	32.500	149.97
D		5.323	37.624	16,887	24.317	112.21
L		6.626	46.833	21,021	30.270	139.68
F		5.971	42.203	18,942	27.276	125.87
S		6.428	45.434	20,392	29.364	135.50
K	4.0	8.221	58.109	26,081	37.556	150.09
D		6.146	43.444	19,499	28.078	112.21
L		7.773	54.941	24,659	35.509	141.91
F		6.928	48.971	21,980	31.651	126.49
S		7.591	53.655	24,082	34.678	138.58
K	5.0	9.195	64.998	29,173	42.009	150.16
D		6.872	48.572	21,801	31.393	112.21
L		8.798	62.185	27,911	40.191	143.66
F		7.775	54.959	24,667	35.521	126.97
S		8.636	61.041	27,397	39.451	141.02
K	6.0	10.076	71.223	31,967	46.032	150.22
D		7.528	53.208	23,881	34.389	112.21
L		9.734	68.807	30,882	44.470	145.11
F		8.549	60.431	27,123	39.057	127.45
S		9.595	67.825	30,442	43.826	143.04

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	10.886	76.947	34,536	49.731	150.24
D		8.130	57.471	25,795	37.144	112.21
L		10.603	74.953	33,641	48.443	146.34
F		9.246	65.355	29,333	42.240	127.61
S		10.490	74.147	33,279	47.921	144.77
K	8.0	11.639	82.276	36,926	53.173	150.26
D		8.692	61.440	27,576	39.709	112.21
L		11.419	80.720	36,229	52.170	147.42
F		9.921	70.126	31,475	45.323	128.08
S		11.331	80.096	35,949	51.767	146.28
K	9.0	12.347	87.275	39,171	56.407	150.28
D		9.219	65.166	29,248	42.113	112.21
L		12.191	86.171	38,676	55.693	148.38
F		10.537	74.484	33,430	48.140	128.26
S		12.130	85.739	38,482	55.414	147.64
K	10.0	13.016	92.005	41,294	59.463	150.30
D		9.718	68.692	30,831	44.395	112.21
L		12.925	91.361	41,005	59.048	149.24
F		11.122	78.614	35,284	50.809	128.42
S		12.891	91.123	40,899	58.894	148.86
K	11.0	13.653	96.505	43,314	62.372	150.31
D		10.192	72.045	32,335	46.563	112.21
L		13.627	96.323	43,232	62.254	150.03
F		11.665	82.452	37,007	53.289	128.42
S		13.621	96.283	43,215	62.229	149.96
K	12.0	14.261	100.800	45,243	65.149	150.32
D		10.645	75.594	33,929	48.857	112.21
L		14.301	101.090	45,372	65.335	150.75
F		12.050	85.241	38,259	55.092	128.59
S		14.324	101.490	45,549	65.590	150.92
K	13.0	14.844	104.920	47,092	67.813	150.33
D		11.080	78.319	35,152	50.619	112.21
L		14.951	105.680	47,430	68.303	151.41
F		12.697	89.749	40,282	58.005	128.59
S		15.002	106.050	47,596	68.538	151.93
K	14.0	15.405	108.890	48,873	70.377	150.34
D		11.498	81.275	36,479	52.530	112.21
L		15.578	110.120	49,424	71.171	152.03
F		13.193	93.257	41,856	60.272	128.75
D	15.0	11.902	84.130	37,760	54.374	112.21
F		13.657	96.532	43,326	62.389	128.75
D	16.0	12.292	86.888	38,998	56.157	112.21
F		14.122	99.825	44,804	64.518	128.92

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
D	17.0	12.670	89.561	40,198	57.884	112.21
F		14.557	102.900	46,183	66.503	128.92
D	18.0	13.038	92.159	41,364	59.564	112.21
F		14.981	105.890	47,530	68.441	128.94
D	19.0	13.395	94.685	42,497	61.196	112.21
F		15.392	108.800	48,832	70.317	128.92
D	20.0	13.743	97.145	43,602	62.786	112.21
D	21.0	14.082	99.541	44,677	64.334	112.21
D	22.0	14.414	101.890	45,729	65.849	112.21
D	23.0	14.738	104.180	46,756	67.329	112.21
D	24.0	15.055	106.420	47,763	68.778	112.21

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.251	9.855	4,423	6.329	140.63
D		0.999	7.869	3,532	5.086	112.29
L		1.042	8.204	3,682	.302	116.99
F		.070	.425	3,781	.445	120.23
S		0.927	7.301	3,277	4.719	104.19
K	0.12	1.386	10.916	4,899	7.055	142.20
D		.094	8.620	3,869	5.571	112.29
L		.153	9.078	4,074	.867	118.25
F		.176	.260	4,156	.985	120.63
S		.030	8.113	3,641	.243	105.69
K	0.15	1.568	12.348	5,542	7.981	143.88
D		.224	9.638	4,326	6.229	112.29
L		.305	10.274	4,611	.640	119.71
F		.316	.365	4,652	.699	120.77
S		.172	9.230	4,143	5.965	107.54
K	0.20	1.832	14.428	6,476	9.325	145.58
D		.413	11.128	4,995	7.192	112.29
L		.530	12.053	5,410	.790	121.62
F		.527	.023	5,396	.771	121.32
S		.384	10.899	4,892	.044	109.98
K	0.30	2.274	17.908	8,038	11.574	147.55
D		1.731	13.626	6,116	8.807	112.29
L		.917	15.098	6,777	9.758	124.39
F		.876	14.776	6,632	.550	121.74
S		.749	13.778	6,184	8.905	113.52
K	0.40	2.643	20.819	9,344	13.455	148.55
D		1.998	15.737	7,064	10.171	112.29
L		2.248	17.748	7,948	11.444	126.35
F		.179	.160	7,702	.09[illegible]	122.44
S		.066	16.271	7,303	10.516	116.09
K	0.50	2.968	23.372	10,490	15.106	149.16
D		.234	17.595	7,897	11.372	112.29
L		.545	20.042	8,996	12.953	127.91
F		.448	19.277	8,652	.458	123.02
S		.350	18.511	8,308	11.964	118.13
K	0.60	3.260	25.674	11,523	16.593	149.57
D		2.447	19.275	8,651	12.457	112.29
L		.816	22.177	9,954	14.333	129.20
F		.694	21.217	9,523	13.713	123.61
S		.612	20.568	9,232	.293	119.83
K	0.70	3.520	27.788	12,472	17.960	149.88
D		2.643	20.819	9,344	13.455	112.29
L		3.067	24.157	10,842	15.613	130.30
F		2.917	22.971	10,310	14.847	123.90
S		.855	.485	10,092	.532	121.28

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	3.778	29.751	13,353	19.228	150.11
D		2.826	22.256	9,989	14.551	112.29
L		3.303	26.016	11,676	16.814	131.26
F		.122	24.586	11,035	15.890	124.04
S		.084	.289	10,902	.698	122.54
K	0.90	4.012	31.594	14,180	20.419	150.29
D		2.997	23.606	10,595	15.257	112.29
L		3.526	27.773	12,466	17.948	132.11
F		.319	26.140	11,732	16.895	124.34
S		.301	25.997	11,668	.802	123.66
K	1.0	4.233	33.334	14,961	21.544	150.43
D		3.160	24.883	11,168	16.082	112.29
L		.739	29.446	13,216	19.031	132.88
F		.503	27.588	12,382	17.830	124.50
S		.509	.633	12,402	.859	124.70
K	1.5	5.199	40.944	18,377	26.463	150.86
D		3.870	30.476	13,678	19.697	112.29
L		4.682	36.876	16,551	23.834	135.87
F		.322	34.035	15,276	21.745	125.41
S		.435	.932	15,678	22.577	128.71
K	2.0	6.012	47.347	21,251	30.601	151.08
D		4.468	35.191	15,795	22.744	112.29
L		5.493	43.620	19,416	27.959	138.04
F		.015	39.493	17,725	25.525	126.02
S		.238	41.252	18,515	26.661	131.63
K	3.0	7.371	58.051	26,055	37.519	151.25
D		5.472	43.099	19,344	27.855	112.29
L		6.879	54.178	24,316	35.015	141.15
F		.164	48.548	21,789	31.377	126.49
S		.621	52.147	23,405	33.703	135.87
K	4.0	8.521	67.106	30,119	43.371	151.41
D		6.319	49.767	22,336	32.164	112.29
L		8.070	63.556	28,526	41.077	143.41
F		7.163	56.412	25,319	36.466	127.29
S		.819	61.580	27,639	39.800	138.95
K	5.0	9.530	75.059	33,668	48.511	151.48
D		7.065	55.770	25,031	36.044	112.29
L		9.134	71.937	32,287	46.493	145.18
F		8.039	63.310	28,415	40.918	127.77
S		.896	70.058	31,444	45.280	141.39
K	6.0	10.443	82.247	36,915	53.157	151.52
D		7.739	60.952	27,357	39.394	112.29
L		10.107	79.596	35,725	51.443	146.64
F		8.817	69.442	31,168	44.881	127.93
S		9.858	77.638	34,846	50.178	143.03

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	11.283	88.857	39,881	57.429	151.56
D		8.359	65.835	29,548	42.551	112.29
L		11.009	86.706	38,916	56.039	147.89
F		9.534	75.090	33,702	48.531	128.08
S		10.805	85.100	38,196	55.001	145.15
K	8.0	12.063	95.006	42,641	61.403	151.58
D		8.937	70.382	31,589	45.489	112.29
L		11.856	93.377	41,910	60.350	148.98
F		10.247	80.698	36,220	52.157	128.75
S		11.672	91.928	41,260	59.414	146.67
K	9.0	12.796	100.780	45,234	65.136	151.60
D		9.479	74.650	33,505	48.247	112.29
L		12.657	99.683	44,740	64.426	149.95
F		10.884	85.716	38,472	55.399	128.92
S		12.494	98.404	44.166	63.599	148.02
K	10.0	13.490	106.220	47,674	68.650	151.61
D		9.991	78.688	35,317	50.857	112.29
L		13.419	105.690	47,435	68.306	150.82
F		11.472	90.353	40,553	58.396	128.92
S		13.249	104.580	46,941	67.594	149.25
K	11.0	14.150	111.440	50,017	72.024	151.63
D		10.479	82.530	37,042	53.340	112.29
L		14.148	111.430	50,011	72.016	151.61
F		12.062	94.995	42,636	61.396	129.25
S		14.031	110.510	49,598	71.422	150.36
K	12.0	14.781	116.410	52,247	75.235	151.65
D		10.947	86.180	38,679	55.698	112.29
L		14.848	116.940	52,487	75.580	152.34
F		12.615	99.348	44,590	64.209	129.43
S		14.755	116.210	52,158	75.107	151.39
K	13.0	15.384	121.160	54,381	78.307	151.65
D		11.391	89.718	40,268	57.986	112.29
L		15.522	122.250	54,870	79.013	153.01
F		13.130	103.400	46,411	66.831	129.43
S		15.454	121.710	54,627	78.663	152.33
D	14.0	11.821	93.104	41,788	60.174	112.29
F		13.643	107.440	48,225	69.443	129.59
D	15.0	12.237	96.374	43.256	62.287	112.29
F		14.122	111.220	49,918	71.882	129.59
D	16.0	12.638	99.534	44,674	64.329	112.29
F		14.604	115.020	51,623	74.336	129.76
D	17.0	13.027	102.60	46,048	66.309	112.29
F		15.053	118.56	53,211	76.623	129.76

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
D	18.0	13.405	105.57	47,384	68.232	112.29
D	19.0	13.772	108.47	48,682	70.102	112.29
D	20.0	14.130	111.28	49,947	71.923	112.29
D	21.0	14.458	114.08	50,384	73.731	112.29
D	22.0	14.820	116.71	52,384	75.433	112.29
D	23.0	15.152	119.33	53,561	77.127	112.29

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.298	11.329	5,085	7.322	142.22
D		.026	8.951	4,018	5.785	112.37
L		.079	9.420	4,228	6.088	118.24
F		.119	.766	4,383	.312	122.59
S		.952	8.306	3,728	5.369	104.27
K	0.12	1.437	12.544	5,630	8.107	143.74
D		.124	9.806	4,401	6.338	112.37
L		.194	10.423	4,678	.736	119.43
F		.229	.723	4,813	.930	122.88
S		.057	9.225	4,141	5.962	105.71
K	0.15	1.625	14.183	6,365	9.166	145.36
D		.256	10.963	4,921	7.086	112.37
L		.323	11.528	5,174	.451	120.91
F		.379	12.031	5,400	.776	123.31
S		.203	10.495	4,711	6.783	107.57
K	0.20	1.899	16.571	7,437	10.710	147.09
D		.451	12.659	5,682	8.182	112.37
L		.586	13.839	6,211	.944	122.84
F		.597	.939	6,256	9.009	123.75
S		.420	12.394	5,563	8.011	110.01
K	0.30	2.355	20.548	9,222	13.281	148.92
D		1.777	15.504	6,959	10.020	112.37
L		.986	17.331	7,779	11.201	125.61
F		.964	.136	7,691	.075	124.20
S		.795	15.667	7,032	10.126	113.55
K	0.40	2.737	23.882	10,719	15.435	149.89
D		.052	17.902	8,035	11.570	112.37
L		.330	20.332	9,126	13.141	127.61
F		.279	19.883	8,924	12.851	124.80
S		.120	18.502	8,304	11.958	116.13
K	0.50	3.072	26.806	12,031	17.325	150.48
D		2.294	20.016	8,984	12.936	112.37
L		.631	23.013	10,329	14.873	129.19
F		.557	22.312	10,014	.420	125.25
S		.412	21.049	9,469	13.604	118.17
K	0.60	3.374	29.443	13,215	19.029	150.88
D		2.513	21.926	9,841	14.171	112.37
L		.918	25.464	11,428	16.457	130.50
F		.808	24.501	10,996	15.835	125.56
S		.680	23.389	10,497	.116	119.86
K	0.70	3.651	31.863	14,301	20.594	151.18
D		2.714	23.683	10,630	15.306	112.37
L		3.179	27.738	12,449	17.927	131.60
F		.036	26.497	11,892	.126	125.71
S		2.930	25.569	11,476	16.525	121.31

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	3.909	34.113	15,311	22.047	151.39
D		2.901	25.318	11,363	16.363	112.37
L		3.423	29.872	13,407	19.306	132.57
F		.254	28.396	12,745	18.352	126.02
S		.165	27.621	12,397	17.851	122.58
K	0.90	4.151	36.224	16,258	23.412	151.57
D		3.077	26.854	12,053	17.356	112.37
L		.654	31.889	14,313	20.610	133.43
F		.460	30.193	13,551	19.514	126.33
S		.389	29.570	13,272	.112	123.73
K	1.0	4.380	38.218	17,153	24.701	151.71
D		3.244	28.306	12,704	18.295	112.37
L		.874	33.810	15,175	21.851	134.21
F		.651	31.865	14,302	20.294	126.49
S		.601	.422	14,103	.309	124.73
K	1.5	5.379	46.937	21,067	30.336	152.13
D		3.973	34.669	15,560	22.406	112.37
L		4.852	42.342	19,004	27.366	137.23
F		.495	39.223	17,604	25.350	127.13
S		.552	.722	17,828	.673	128.74
K	2.0	6.219	54.274	24,360	35.078	152.34
D		4.587	40.032	17,967	25.873	112.37
L		5.692	49.672	22,294	32.103	139.42
F		.210	45.462	20,405	29.383	127.61
S		.375	46.908	21,054	30.317	131.66
K	3.0	7.628	66.563	29,875	43.020	152.55
D		5.610	48.961	21,975	31.644	112.37
L		7.128	62.207	27,920	40.205	142.57
F		6.421	56.035	25,150	36.216	128.42
S		.795	59.298	26,615	38.325	135.90
K	4.0	8.814	76.917	34,523	49.712	152.66
D		6.487	56.613	25,410	36.590	112.37
L		8.362	72.976	32,753	47.165	144.84
F		7.444	64.963	29,157	41.987	128.92
S		8.024	70.026	31,430	45.248	138.98
K	5.0	9.859	86.032	38,614	55.604	152.73
D		7.253	63.296	28,409	40.909	112.37
L		9.465	82.600	37,072	53.384	146.63
F		8.354	72.906	32,722	47.119	129.43
S		9.129	79.665	35,756	51.488	141.42
K	6.0	10.802	94.269	42,311	60.927	152.77
D		7.945	69.338	31,121	44.814	112.37
L		10.473	91.392	41,021	59.067	148.11
F		9.176	80.072	35,939	51.751	129.76
S		10.144	88.522	39,731	57.213	143.45

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	11.670	101.840	45,710	65.822	152.80
D		8.582	75.412	33.614	48.404	112.37
L		11.408	99.556	44,684	64.344	149.37
F		9.937	86.714	38,920	56.044	130.10
S		11.089	96.770	43,433	62.543	145.19
K	8.0	12.479	108.900	48,877	70.382	152.83
D		9.175	80.064	35,935	51.746	112.37
L		12.286	107.210	48,122	69.295	150.47
F		10.637	92.824	41,662	59.993	130.27
S		11.979	104.530	46,918	67.562	146.71
K	9.0	13.236	115.510	51,845	74.656	152.84
D		9.731	84.920	38,114	54.884	112.37
L		13.115	114.450	51,371	73.975	151.45
F		11.297	98.584	44,248	63.716	130.45
S		12.823	111.900	50,224	72.322	148.06
K	10.0	13.954	121.770	54,654	78.701	152.86
D		10.257	89.514	40,176	57.853	112.37
L		13.905	121.350	54,465	78.430	152.33
F		11.908	103.920	46,641	67.163	130.45
S		13.628	118.920	53,378	76.864	149.29
K	11.0	14.636	127.730	57,326	82.548	152.86
D		10.758	93.884	42,137	60.678	112.37
L		14.661	127.940	57,424	82.689	153.13
F		12.503	109.280	49,048	70.628	130.79
S		14.400	125.660	56,401	81.218	150.40
K	12.0	15.287	133.410	59,878	86.225	152.87
D		11.236	98.058	44,011	63.375	112.37
L		15.386	134.270	60,266	86.782	153.86
F		13.097	114.290	51,297	73.867	130.97
S		15.142	132.140	59,310	85.407	151.42
D	13.0	11.696	102.060	45,808	65.963	112.37
F		13.650	119.110	53,463	76.985	131.14
D	14.0	12.137	105.913	47,537	68.453	112.37
F		14.184	123.780	55,555	79.999	131.32
D	15.0	12.563	109.643	49,206	70.857	112.37
F		14.701	128.290	57,582	82.919	131.49
D	16.0	12.975	113.237	50,820	73.180	112.37
F		15.204	132.680	59,552	85.753	131.67
D	17.0	13.374	116.710	52,383	75.431	112.37
D	18.0	13.762	120.106	53,903	77.619	112.37
D	19.0	14.139	123.397	55,380	79.746	112.37
D	20.0	14.506	126.593	56,818	81.818	112.37
D	21.0	14.864	129.715	58,220	83.836	112.37
D	22.0	15.214	132.770	59,591	85.811	112.37

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.344	12.933	5,805	8.359	143.72
D		.052	10.118	4,542	6.540	112.43
L		.117	.743	4,822	.943	119.37
F		.160	11.164	5,011	7.215	124.04
S		0.978	9.406	4,222	6.079	104.51
K	0.12	1.491	15.023	6,743	9.709	145.19
D		.152	11.084	4,975	7.164	112.43
L		.264	12.164	5,459	.862	120.57
F		.274	.259	5,502	.923	124.34
S		.094	10.523	4,723	6.801	106.74
K	0.15	1.682	16.178	7,261	10.456	146.77
D		.288	12.393	5,562	8.010	112.43
L		.398	13.454	6,039	.695	122.06
F		.426	.723	6,159	.869	124.50
S		.236	11.890	5,336	7.684	107.87
K	0.20	1.964	18.893	8,480	12.211	148.44
D		.487	14.310	6,423	9.249	112.43
L		.640	15.783	7,084	10.201	124.00
F		.651	.884	7,129	.265	124.80
S		.459	14.041	6,302	9.075	110.31
K	0.30	2.434	23.416	10,510	15.134	150.22
D		1.822	17.526	7,866	11.327	112.43
L		2.054	19.766	8,872	12.628	126.80
F		.027	.500	8,752	.603	125.10
S		1.845	17.749	7,966	11.471	113.86
K	0.40	2.823	27.207	12,211	17.584	151.16
D		.103	20.237	9,083	13.079	112.43
L		.410	23.188	10,407	14.986	128.83
F		.358	22.683	10,180	.660	126.02
S		.179	20.960	9,407	13.547	116.45
K	0.50	3.174	30.534	13,704	19.734	151.73
D		2.352	22.626	10,155	14.623	112.43
L		.728	26.245	11,780	16.963	130.41
F		.646	25.455	11,425	.452	126.49
S		.479	23.845	10,703	15.412	118.49
K	0.60	3.477	33.457	15,017	21.624	151.77
D		2.576	24.786	11,124	16.019	112.43
L		3.018	29.040	13,034	18.768	131.43
F		2.906	27.954	12,547	.067	126.81
S		.754	26.496	11,892	17.125	120.19
K	0.70	3.772	36.288	16,287	23.453	152.40
D		2.783	26.771	12,016	17.302	112.43
L		3.288	31.364	14,198	20.445	132.85
F		.142	30.232	13,609	19.539	126.97
S		.011	28.966	13,001	18.721	121.65

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	4.038	38.848	17,436	25.107	152.61
D		2.975	28.620	12,845	18.497	112.43
L		3.541	34.067	15,290	22.018	133.83
F		.363	32.360	14,524	20.915	127.13
S		.252	31.290	14,043	.225	122.92
K	0.90	4.287	41.250	18,514	26.660	152.78
D		3.155	30.356	13,628	19.619	112.43
L		.780	36.368	16,285	23.505	134.70
F		.572	34.366	15,424	22.211	127.29
S		.481	33.494	15,033	21.648	124.05
K	1.0	4.523	43.519	19,533	28.127	152.92
D		3.326	31.997	14,361	20.680	112.43
L		4.008	38.558	17,306	24.921	135.48
F		3.770	36.270	16,279	23.280	127.45
S		.700	35.598	15,977	.007	125.08
K	1.5	5.555	53.442	23,986	34.540	153.32
D		4.073	39.189	17,590	25.328	112.43
L		5.019	48.289	21,674	31.210	138.54
F		4.653	44.763	20,091	28.931	128.42
S		.677	44.995	20,195	29.081	129.09
K	2.0	6.422	61.791	27,734	39.936	153.52
D		4.703	45.242	20,310	29.247	112.43
L		5.888	56.649	25,426	36.613	140.75
F		.386	51.822	23,259	33.493	128.75
S		.523	53.140	23,851	34.345	132.03
K	3.0	7.875	75.769	34,007	48.970	153.73
D		5.760	55.422	24,875	35.819	112.43
L		7.374	79.945	31,842	45.852	143.92
F		6.631	63.797	28,634	41.233	129.43
S		.982	67.177	30,151	43.417	136.28
K	4.0	9.101	87.561	39,300	56.592	153.84
D		6.652	63.995	28,723	41.361	112.43
L		8.650	83.226	37,354	53.790	146.22
F		7.667	73.761	33,106	47.673	129.59
S		8.245	79.329	35,605	51.271	139.37
K	5.0	10.179	97.936	43,957	63.297	153.90
D		7.437	71.550	32,113	46.244	112.43
L		9.791	94.200	42,279	60.882	148.02
F		8.617	82.902	37,209	53.581	130.27
S		9.380	90.251	40,507	58.330	141.82
K	6.0	11.154	107.310	48,165	69.357	153.94
D		8.146	78.379	35,178	50.662	112.43
L		10.833	104.230	46,781	67.365	149.52
F		9.477	91.178	40,923	58.929	130.79
S		10.423	100.280	45,009	64.813	143.85

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	12.050	115.940	52,034	74.929	153.97
D		8.799	84.658	37,997	54.715	112.43
L		11.801	113.540	50,960	73.382	150.79
F		10.263	98.746	44,320	63.824	131.14
S		11.394	109.630	49,204	70.853	145.59
K	8.0	12.884	123.960	55,635	80.115	153.99
D		9.407	90.504	40,621	58.494	112.43
L		12.709	122.270	54,881	79.028	151.90
F		10.987	105.710	47,444	68.318	131.32
S		12.309	118.420	53,152	76.539	147.12
K	9.0	13.667	131.490	59,018	84.985	154.01
D		9.977	95.993	43,084	62.041	112.43
L		13.567	130.530	58,587	84.364	152.88
F		11.669	112.270	50,388	72.559	131.49
S		13.175	126.770	56,896	81.930	148.47
K	10.0	14.407	138.61	62,212	89.584	154.02
D		10.517	101.18	45,415	65.397	112.43
L		14.384	138.40	62,116	89.446	153.77
F		12.317	118.50	53,187	76.588	131.67
S		14.003	134.73	60,469	87.074	149.70
K	11.0	15.112	145.40	65,257	93.971	154.03
D		11.030	106.13	47,632	68.590	112.43
L		15.165	145.91	65,489	94.304	154.58
F		12.918	124.43	55,783	80.327	131.67
S		14.796	142.36	63,894	92.007	150.82
D	12.0	11.521	110.84	49,750	71.639	112.43
F		13.510	129.99	58,341	84.010	131.85
S		15.559	149.70	67,189	96.752	151.84
D	13.0	11.991	115.37	51,781	74.564	112.43
F		14.062	135.29	60,722	87.440	131.85
D	14.0	12.444	119.72	53,735	77.378	112.43
F		14.612	140.59	63,100	90.864	132.03
D	15.0	12.881	123.93	55,623	80.096	112.43
F		15.146	145.72	65,405	94.182	132.21
D	16.0	13.303	127.99	57,446	82.722	112.43
D	17.0	13.712	131.93	59,214	85.267	112.43
D	18.0	14.110	135.75	60,931	87.741	112.43
D	19.0	14.497	139.48	62,601	90.145	112.43
D	20.0	14.873	143.10	64,227	92.487	112.43
D	21.0	15.240	146.63	65,816	94.768	112.43

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.390	14.673	6,586	9.484	145.14
D		.077	11.372	5,104	7.350	112.49
L		.153	12.177	5,465	.870	120.45
F		.198	.647	5,676	8.174	125.10
S		.005	10.615	4,764	6.860	104.99
K	0.12	1.537	16.233	7,286	10.492	146.58
D		.180	12.458	5,591	8.052	112.49
L		.276	13.474	6,047	.708	121.66
F		.317	.905	6,241	9.008	125.56
S		.117	11.794	5,294	7.623	106.50
K	0.15	1.737	18.338	8,212	11.852	148.11
D		.319	13.928	6,251	9.002	112.49
L		.441	15.250	6,845	.856	123.16
F		.478	.604	7,003	10.085	126.02
S		.271	13.418	6,022	8.672	108.37
K	0.20	2.027	21.407	9,608	13.835	148.69
D		1.523	16.083	7,219	10.394	112.49
L		.694	17.890	8,030	11.562	125.12
F		.713	18.085	8,117	.688	126.49
S		.501	15.846	7,112	10.241	110.83
K	0.30	2.512	26.520	11,903	17.140	151.45
D		1.865	19.697	8,841	12.730	112.49
L		2.122	22.404	10,056	14.480	127.95
F		.106	.233	9,979	.369	126.97
S		1.897	20.031	8,990	12.946	114.39
K	0.40	2.917	30.805	13,826	19.910	152.35
D		.154	22.744	10,208	14.700	112.49
L		.489	26.283	11,796	16.987	129.99
F		.440	25.769	11,566	.654	127.45
S		.240	23.655	10,617	15.288	116.99
K	0.50	3.373	35.616	15,986	23.019	152.91
D		2.408	25.429	11,413	16.435	112.49
L		.817	29.749	13,352	19.227	131.59
F		.742	28.954	12,995	18.713	128.08
S		.549	26.911	12,078	17.393	119.04
K	0.60	3.578	37.960	17,037	24.534	153.29
D		2.638	27.856	12,503	18.004	112.49
L		3.117	32.917	14,774	21.274	132.29
F		.016	31.770	14,292	20.581	128.59
S		2.832	29.903	13,421	19.326	120.75
K	0.70	3.890	41.074	18,435	26.546	153.56
D		2.850	30.089	13,504	19.446	112.49
L		3.396	35.856	16,093	23.175	134.05
F		.266	34.483	15,477	22.287	128.92
S		.096	32.688	14,672	21.127	122.21

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	4.164	43.968	19,734	28.417	153.76
D		3.046	32.166	14,437	20.789	112.49
L		.657	38.615	17,332	24.957	135.04
F		.492	36.870	16,548	23.829	128.94
S		.344	35.312	15,849	22.822	123.49
K	0.90	4.421	46.684	20,953	30.173	153.93
D		3.231	34.117	15,313	22.050	112.49
L		.904	41.223	18,502	26.643	135.95
F		.717	39.253	17,618	25.369	129.43
S		.580	37.799	16,810	24.430	124.63
K	1.0	4.664	49.252	22,105	31.832	154.06
D		3.406	35.962	16,141	23.243	112.49
L		4.139	43.706	19,616	28.313	136.71
F		3.924	41.430	18,595	26.776	129.59
S		.805	40.173	18,031	25.964	125.66
K	1.5	5.727	60.474	27,143	39.085	154.45
D		4.171	44.045	19,768	28.467	112.49
L		5.184	54.736	24,567	35.376	139.79
F		4.812	50.808	22,804	32.838	129.76
S		.809	50.784	22,793	32.822	129.70
K	2.0	6.622	69.918	31,381	45.189	154.64
D		4.817	50.859	22,827	32.871	112.49
L		6.081	64.211	28,820	41.500	142.02
F		5.586	58.978	26,471	38.118	130.45
S		.680	59.971	26,917	38.760	132.64
K	3.0	8.120	85.741	38,483	55.415	154.84
D		5.899	62.289	27,957	40.257	112.49
L		7.616	80.415	36,093	51.973	145.23
F		6.877	72.618	32,593	46.933	131.14
S		7.180	75.809	34,025	48.996	136.91
K	4.0	9.383	99.072	44,467	64.031	154.95
D		6.812	71.925	32,282	46.486	112.49
L		8.889	93.881	42,137	60.677	146.79
F		7.973	84.190	37,787	54.451	131.67
S		8.479	89.526	40,182	57.862	140.02
K	5.0	10.495	110.820	49,737	71.621	155.01
D		7.616	80.415	36,093	51.973	112.49
L		10.112	106.770	47,924	69.010	149.36
F		8.926	94.254	42,304	60.917	131.85
S		9.646	101.850	45,714	65.828	142.47
K	6.0	11.498	121.420	54,494	78.471	155.04
D		8.343	88.091	39,538	56.934	112.49
L		11.189	118.140	53,026	76.357	150.90
F		9.805	103.530	46,468	66.913	132.21
S		10.718	113.170	50,794	73.143	144.51

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	12.422	131.17	58,872	84.775	155.08
D		9.011	95.14	42,705	61.495	112.49
L		12.198	128.70	57,763	83.179	152.15
F		10.619	112.13	50,327	72.470	132.57
S		11.716	123.72	55,528	79.960	146.26
K	8.0	13.282	140.24	62,945	90.640	155.09
D		9.633	101.72	45,654	65.741	112.49
L		13.126	138.60	62,207	89.578	153.27
F		11.368	120.04	53,877	77.582	132.75
S		12.657	133.64	59,984	86.376	147.79
K	9.0	14.122	148.77	66,771	96.150	155.11
D		10.217	107.88	48,423	69.728	112.49
L		14.012	147.96	66,408	95.627	154.27
F		12.074	127.49	57,222	82.399	132.93
S		13.548	143.06	64,210	92.461	149.16
K	10.0	14.852	156.83	70,388	101.360	155.12
D		10.770	113.72	51,042	73.500	112.49
L		14.856	156.87	70,408	101.380	155.17
F		12.745	134.57	60,400	86.977	133.11
S		14.399	152.04	68,242	98.268	150.39
K	11.0	15.578	164.50	73,829	106.310	155.13
D		11.296	119.27	53,534	77.088	112.49
L		15.663	165.39	74,232	106.890	155.98
F		13.367	141.14	63,349	91.222	133.11
S		15.214	160.65	72,106	103.830	151.51
D	12.0	11.798	124.58	55,914	80.515	112.49
F		13.981	147.62	66,257	95.409	133.30
D	13.0	12.280	129.66	58,197	83.803	112.49
F		14.551	153.65	68,962	99.304	130.30
D	14.0	12.743	134.56	60,394	86.966	112.49
F		15.121	159.67	71,664	103.190	133.48
D	15.0	13.191	139.29	62,515	90.020	112.49
D	16.0	13.623	143.85	64,564	92.972	112.49
D	17.0	14.042	148.28	66,550	95.832	112.49
D	18.0	14.450	152.58	68,481	98.612	112.49
D	19.0	14.846	156.76	70,357	101.314	112.49
D	20.0	15.231	160.83	72,186	103.946	112.49

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.434	16.551	7,429	10.697	146.50
D		.102	12.715	5,707	8.218	112.55
L		.187	13.726	6,161	.872	121.49
F		.238	14.291	6,414	9.236	126.49
S		.028	11.869	5,323	7.665	104.97
K	0.12	1.586	18.304	8,215	11.830	147.90
D		.207	13.929	6,252	9.002	112.55
L		.316	15.188	6,817	.816	122.72
F		.358	.674	7,035	10.130	126.65
S		.142	13.177	5,914	8.517	106.47
K	0.15	1.791	20.669	9,277	13.359	149.38
D		.349	15.573	6,990	10.065	112.55
L		.490	17.190	7,716	11.110	124.23
F		.524	.591	7,895	.369	127.13
S		.299	14.992	6,729	9.689	108.34
K	0.20	2.090	24.118	10,825	15.587	150.95
D		1.558	17.982	8,071	11.622	112.55
L		.747	20.166	9,051	13.033	126.21
F		.764	.363	9,140	.161	127.45
S		.534	17.704	7,946	11.442	110.80
K	0.30	2.588	29.864	13,404	19.302	152.61
D		1.908	22.023	9,885	14.234	112.55
L		2.188	25.255	11,335	16.323	129.06
F		.169	.035	11,236	.180	127.93
S		1.939	22.379	10,045	14.464	114.36
K	0.40	3.012	34.682	15,566	22.415	153.49
D		2.204	25.431	11,414	16.436	112.55
L		.567	29.661	13,313	19.170	131.12
F		.508	28.940	12,989	18.704	128.08
S		.290	26.429	11,862	17.081	116.96
K	0.50	3.372	38.912	17,465	25.149	154.03
D		2.464	28.433	12,761	18.376	112.55
L		.906	33.533	15,051	21.673	132.73
F		.822	32.569	14,618	.050	128.92
S		.605	30.067	13,495	19.433	119.01
K	0.60	3.702	42.727	19,177	27.615	154.39
D		2.699	31.146	13,995	20.084	112.55
L		3.215	37.103	16,653	23.980	134.07
F		.104	35.817	16,076	.149	129.43
S		2.895	33.409	14,995	21.592	120.72
K	0.70	4.006	46.229	20,749	29.878	154.66
D		2.915	33.642	15,099	21.743	112.55
L		3.502	40.418	18,141	26.123	135.22
F		.361	38.787	17,409	25.069	129.76
S		.165	36.523	16,392	23.605	122.18

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	4.288	49.484	22,210	31.982	154.86
D		3.116	35.965	16,142	23.244	112.55
L		.772	43.528	19,536	28.133	136.21
F		.598	41.520	18,678	26.897	129.93
S		.419	39.453	17,708	25.499	123.46
K	0.90	4.552	52.539	23,581	33.956	155.01
D		3.305	38.146	17,121	24.654	112.55
L		4.026	46.468	20,856	30.032	137.10
F		3.821	44.097	19,792	28.499	130.10
S		.659	42.232	18,955	27.295	124.60
K	1.0	4.803	55.426	24,877	35.822	155.14
D		3.484	40.209	18,047	25.987	112.55
L		4.269	49.266	22,112	31.841	137.89
F		.033	46.542	20,890	30.081	130.27
S		3.889	44.884	20,145	29.009	125.63
K	1.5	5.896	68.049	30,542	43.981	155.52
D		4.267	49.247	22,103	31.828	112.55
L		5.346	61.699	27,692	39.877	141.00
F		4.959	57.231	25,687	36.989	130.79
S		.916	56.739	25,466	.671	129.67
K	2.0	6.817	78.372	35,310	50.847	155.71
D		4.927	56.865	25,523	36.752	112.55
L		6.272	72.380	32,486	46.780	143.25
F		5.742	66.261	29.740	42.825	131.14
S		.806	67.005	30,074	43.306	132.62
K	3.0	8.358	96.469	43,000	62.349	155.90
D		6.035	69.545	31,258	45.012	112.55
L		7.854	90.646	40,684	58.586	146.48
F		.070	81.588	36,619	52.731	131.85
S		.339	84.701	38,016	54.743	136.88
K	4.0	9.658	111.470	50,029	72.041	156.00
D		6.968	80.419	36,094	51.976	112.55
L		9.214	106.340	47,728	68.728	148.82
F		8.208	94.724	42,515	61.221	132.57
S		.669	100.050	44,906	64.664	140.02
K	5.0	10.802	124.370	55,954	80.573	156.05
D		7.791	89.913	40,356	58.111	112.55
L		10.429	120.360	54,021	77.789	150.66
F		9.202	106.190	47,664	68.636	132.93
S		.860	113.800	51,074	73.546	142.44
K	6.0	11.836	136.500	61,310	88.286	156.09
D		8.534	98.494	44,207	63.657	112.55
L		11.540	133.170	59,772	86.072	152.18
F		10.094	116.490	52,286	75.290	133.11
S		.956	126.440	56,751	81.720	144.48

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	12.787	147.57	66,234	95.376	156.12
D		9.218	106.38	47,748	68.757	112.55
L		12.570	145.07	65,112	93.761	153.47
F		10.963	122.53	56,788	81.775	133.86
S		11.977	138.22	62,040	89.337	146.24
K	8.0	13.672	157.78	70,818	101.980	156.14
D		9.855	113.73	51,046	73.505	112.55
L		13.537	156.23	70,122	100.970	154.61
F		11.753	135.64	60,879	87.666	134.23
S		12.938	149.32	67,018	96.505	147.76
K	9.0	14.503	167.37	75,121	108.170	156.16
D		10.452	120.63	54,141	77.963	112.55
L		14.451	166.78	74,856	107.790	155.61
F		12.484	144.07	64,622	93.113	134.42
S		13.850	159.82	71,740	103.300	149.13
K	10.0	15.289	176.44	79,192	114.040	156.17
D		11.017	127.15	57,070	82.180	112.55
L		15.322	176.83	79,365	114.280	156.51
F		13.177	152.07	68,254	98.286	134.60
S		14.719	169.88	76,245	109.790	150.36
D	11.0	11.555	133.36	59,856	86.192	112.55
F		13.821	159.49	71,586	103.090	134.60
S		15.553	179.49	80,562	116.010	151.48
D	12.0	12.059	139.29	62,518	90.024	112.55
F		14.455	166.82	74,875	107.820	134.79
D	13.0	12.562	144.98	65,070	93.700	112.55
F		15.045	173.64	77,933	112.220	134.79
D	14.0	13.036	150.45	67,526	97.237	112.55
D	15.0	13.494	155.73	69,897	100.650	112.55
D	16.0	13.937	160.84	72,189	103.950	112.55
D	17.0	14.365	165.79	74,410	107.150	112.55
D	18.0	14.782	170.60	76,569	110.258	112.55
D	19.0	15.187	175.27	78,666	113.279	112.55

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.478	18.572	8,336	12.003	147.79
D		.126	14.149	6,351	9.145	112.60
L		.225	15.394	6,909	.949	122.50
F		.278	16.056	7,206	10.377	127.77
S		.051	13.212	5,930	8.539	105.13
K	0.12	1.634	20.531	9,215	13.270	149.49
D		.233	15.499	6,957	10.017	112.60
L		.356	17.033	7,645	11.009	123.74
F		.403	.639	7,913	.395	128.08
S		.168	14.680	6,589	9.488	106.64
K	0.15	1.844	23.176	10,402	14.979	150.59
D		.379	17.329	7,778	11.200	112.60
L		.534	19.276	8,653	12.460	125.26
F		.575	.791	8,883	.791	128.59
S		.329	16.701	7,496	10.794	108.51
K	0.20	2.171	27.031	12,133	17.471	152.10
D		1.592	20.010	8,981	12.932	112.60
L		.800	22.616	10,151	14.617	127.26
F		.824	.915	10,285	.810	128.94
S		.569	19.723	8,852	12.747	110.97
K	0.30	2.663	33.458	15,017	21.624	153.72
D		1.950	24.507	10,999	15.839	112.60
L		2.254	28.324	12,712	18.306	130.13
F		.245	.206	12,660	.230	129.59
S		1.984	24.932	11,190	16.113	114.54
K	0.40	3.091	38.847	17,436	25.107	154.57
D		2.252	28.298	12,701	18.289	112.60
L		.644	33.227	14,913	21.475	132.14
F		.602	32.698	14,676	.133	130.10
S		.343	29.439	13,213	19.027	117.13
K	0.50	3.467	43.572	19,557	28.161	155.06
D		2.518	31.639	14,200	20.448	112.60
L		.993	37.608	16,879	24.306	133.84
F		.917	36.655	16,452	23.690	130.45
S		.666	33.496	15,034	21.649	119.20
K	0.60	3.808	47.848	21,476	30.924	155.44
D		2.758	34.658	15,555	22.400	112.60
L		3.311	41.612	18,677	26.895	135.18
F		.208	40.313	18,094	.055	130.97
S		2.962	37.219	16,705	24.055	120.91
K	0.70	4.119	51.765	23,233	33.456	155.69
D		2.979	37.435	16,802	24.194	112.60
L		3.607	45.329	20,345	29.297	136.34
F		.474	43.660	19,596	28.218	131.32
S		.238	40.687	18,262	26.297	122.37

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			C
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	4.409	55.407	24,868	35.811	155.89
D		3.185	40.020	17,962	25.865	112.60
L		.885	48.817	21,910	31.551	137.35
F		.719	46.737	20,977	30.206	131.49
S		.498	43.951	19,726	28.406	123.65
K	0.90	4.681	58.826	26,403	38.020	156.04
D		3.378	42.447	19,051	27.434	112.60
L		4.147	52.114	23,390	33.681	138.23
F		3.950	49.639	22,279	32.082	131.67
S		.744	47.049	21,117	30.408	124.80
K	1.0	4.938	62.055	27,852	40.107	156.16
D		3.561	44.743	20,082	28.918	112.60
L		4.397	55.252	24,799	35.710	139.04
F		.175	52.465	23,548	33.909	132.03
S		3.979	50.002	22,442	32.317	125.83
K	1.5	6.052	76.182	34,193	49.237	156.53
D		4.361	54.800	24,595	35.417	112.60
L		5.506	69.196	31,057	44.722	142.17
F		.141	64.609	28,998	41.854	132.75
S		.030	63.209	28,370	40.853	129.87
K	2.0	7.008	88.071	39,529	56.921	156.71
D		5.036	63.277	28,400	40.896	112.60
L		6.460	81.175	36,434	52.464	144.44
F		5.953	74.808	33,576	48.349	133.11
S		.940	74.645	33,503	48.244	132.82
K	3.0	8.594	107.990	48,470	69.796	156.90
D		6.167	77.498	34,783	50.087	112.60
L		8.090	101.660	45,628	65.704	147.36
F		7.321	92.001	41,292	59.461	133.67
S		.509	94.361	42,351	60.986	137.10
K	4.0	9.929	124.770	56,002	80.642	157.00
D		7.121	89.487	40,164	57.836	112.60
L		9.490	119.260	53,527	77.078	150.05
F		8.489	106.680	47,881	68.948	134.23
S		.867	111.430	50,013	72.018	140.21
K	5.0	11.105	139.550	62,634	90.192	157.05
D		7.962	100.051	44,905	64.663	112.60
L		10.742	134.983	60,585	87.241	151.91
F		9.532	119.776	53,759	77.412	134.79
S		10.088	126.771	56,899	81.933	142.66
K	6.0	12.168	152.904	68,628	98.824	157.09
D		8.722	109.600	49,191	70.835	112.60
L		11.886	149.355	67,035	96.530	153.44
F		10.456	131.395	58,974	84.922	134.99
S		11.209	140.861	63,222	91.040	144.71

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	13.145	185.19	74,140	106.760	157.12
D		9.420	118.38	53,132	76.510	112.60
L		12.947	162.70	73,023	105.150	154.74
F		11.310	142.12	63,788	91.855	135.18
S		12.254	153.99	69,115	99.525	146.46
K	8.0	14.054	176.61	79,269	114.140	157.13
D		10.071	126.55	56,801	81.793	112.60
L		13.943	175.21	78,641	113.240	155.89
F		12.108	152.15	68,291	98.338	135.37
S		13.237	166.35	74,661	107.510	147.65
K	9.0	14.908	187.35	84,085	121.080	157.15
D		10.681	134.23	60,246	86.754	112.60
L		14.885	187.05	83,952	120.890	156.90
F		12.842	161.38	72,432	104.300	135.37
S		14.170	178.07	79,921	115.090	149.36
K	10.0	15.716	197.50	88,642	127.650	157.16
D		11.259	141.49	63,505	91.447	112.60
L		15.781	198.31	89,008	128.170	157.81
F		13.556	170.35	76,459	110.100	135.56
S		15.060	189.25	84,940	122.310	150.60
D	11.0	11.809	148.39	66,605	95.911	112.60
F		14.218	178.67	80,192	115.470	135.56
D	12.0	12.334	154.99	69,567	100.17	112.60
F		14.871	186.88	83,876	120.78	135.76
D	13.0	12.838	161.32	72,407	104.27	112.60
F		15.478	194.51	87,301	125.71	135.76
D	14.0	13.322	167.41	75,140	108.20	112.60
D	15.0	13.790	173.29	77,778	112.00	112.60
D	16.0	14.242	178.97	80,329	115.67	112.60
D	17.0	14.680	184.48	82,800	119.23	112.60
D	18.0	15.106	189.83	85,202	122.69	112.60

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.605	25.531	11,459	16.501	151.35
D		.196	19.016	8,535	12.290	112.73
L		.329	21.143	9,489	13.665	125.33
F		.402	22.302	10,010	14.414	132.21
S		.122	17.838	8,006	11.529	105.76
K	0.12	1.773	28.198	12,656	18.224	152.59
D		.310	20.831	9,350	13.463	112.73
L		.471	23.394	10,500	15.120	126.60
F		.538	24.464	10,980	.811	132.39
S		.246	19.820	8,896	12.810	107.26
K	0.15	2.003	31.857	14,298	20.589	154.19
D		1.464	23.290	10,453	15.052	112.73
L		.665	26.479	11,884	17.113	128.16
F		.722	27.389	12,293	.702	132.57
S		.418	22.497	10,121	14.574	109.14
K	0.20	2.329	37.045	16,627	23.943	155.28
D		1.691	26.893	12,070	17.381	112.73
L		.953	31.062	13,941	20.076	130.20
F		.994	.713	14,234	.496	132.93
S		.674	26.628	11,952	17.210	114.21
K	0.30	2.880	45.800	20,556	29.601	156.75
D		.071	32.936	14,782	21.287	112.73
L		.446	38.901	17,460	25.142	133.14
F		.452	39.002	17,505	.207	133.48
S		.117	33.661	15,108	21.656	115.20
K	0.40	3.341	53.144	23,852	34.347	157.52
D		2.391	38.032	17,069	24.580	112.73
L		.869	45.635	20,482	29.494	135.26
F		.843	.223	20,297	.228	134.04
S		.499	39.751	17,841	25.107	117.82
K	0.50	3.744	59.553	26,729	38.489	157.88
D		2.674	42.521	19,084	27.482	112.73
L		3.248	51.652	23,183	33.383	136.93
F		.188	50.704	22,757	32.771	134.42
S		2.844	45.224	20,298	29.229	119.89
K	0.60	4.113	65.416	29,360	42.279	158.31
D		2.929	46.580	20,906	30.105	112.73
L		3.593	57.152	25,651	36.938	138.31
F		.507	55.779	25,035	.050	134.99
S		.160	50.250	22,554	32.477	121.61
K	0.70	4.449	70.759	31,759	45.732	158.54
D		3.163	50.311	22,581	32.517	112.73
L		.915	62.257	27,943	40.237	139.49
F		.799	60.419	27,118	39.049	135.37
S		.454	54.934	24,656	35.504	123.08

For-mula	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	4.761	75.728	33,989	48.944	158.71
D		3.382	53.786	24,140	34.762	112.73
L		4.216	67.047	30,093	43.334	140.52
F		.067	64.683	29,032	41.805	135.56
S		3.731	59.342	26,634	38.353	124.37
K	0.90	5.055	80.390	36,081	51.956	158.85
D		3.587	57.04	25,604	36.870	112.73
L		4.500	71.575	32,125	46.260	141.43
F		.320	68.704	30,386	44.404	135.76
S		3.994	63.521	28,510	41.054	125.51
K	1.0	5.332	84.797	38,059	54.805	158.90
D		3.781	60.134	26,989	38.865	112.73
L		4.771	75.886	34,060	49.064	142.26
F		.580	72.838	32,692	47.076	136.54
S		.245	67.510	30,301	43.632	126.55
K	1.5	6.544	104.070	46,711	67.264	159.29
D		4.631	73.649	33,056	47.600	112.73
L		5.975	95.036	42,655	61.423	145.46
F		.634	89.600	40,216	57.909	137.14
S		.366	85.342	38,304	55.157	130.62
K	2.0	7.564	120.300	53,993	77.750	159.46
D		5.347	85.043	38,169	54.964	112.73
L		7.010	111.49	50,039	72.056	147.78
F		6.534	103.92	46,641	67.163	137.74
S		.337	100.78	45,233	65.136	133.58
K	3.0	9.273	147.45	66,196	95.322	159.62
D		6.549	104.15	46,747	67.316	112.73
L		8.779	139.62	62,667	90.241	151.11
F		.050	128.03	57,463	82.747	138.56
S		.010	127.40	57,181	82.340	137.88
K	4.0	10.714	170.40	76,479	110.130	159.71
D		7.562	120.27	53,979	77.730	112.73
L		10.298	163.80	73,516	105.860	153.52
F		9.337	148.50	66,652	95.978	139.19
S		.459	150.44	67,524	97.234	141.01
K	5.0	11.982	190.57	85,532	123.170	159.76
D		8.454	134.46	60,352	86.906	112.73
L		11.656	185.39	83,209	119.820	155.42
F		10.455	166.28	74,633	107.470	139.40
S		.761	171.16	76,821	110.620	143.49
K	6.0	13.128	208.80	93,715	134.959	159.79
D		9.261	147.29	66,112	95.201	112.73
L		12.898	205.13	92,068	132.578	156.98
F		11.470	182.43	81,881	117.907	139.61
S		.958	190.18	85,359	122.916	145.54

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	14.183	225.56	101,240	146.46	159.82
D		10.003	159.10	71,408	102.82	112.73
L		14.050	223.45	100,290	144.42	158.32
F		12.389	197.05	88,440	127.36	139.61
S		13.072	207.91	93,315	134.38	147.31
K	8.0	15.163	241.16	108,240	155.86	159.82
D		10.694	170.08	76,339	109.93	112.73
L		15.131	240.64	108,010	155.53	159.49
F		13.245	210.65	94,548	136.15	139.61
S		14.121	224.59	100,800	145.15	148.85
D	9.0	11.342	180.40	80,969	116.59	112.73
F		14.069	223.77	100,430	144.62	139.82
S		15.116	240.41	108,000	155.38	150.22
D	10.0	11.956	190.16	85,349	122.90	112.73
F		14.830	235.87	105,860	152.44	139.82
D	11.0	12.540	199.44	89,516	128.90	112.73
F		15.554	247.38	111,030	159.89	139.82
D	12.0	13.097	208.31	93,495	134.63	112.73
D	13.0	13.632	216.82	97,313	140.13	112.73
D	14.0	14.147	225.00	100,990	145.42	112.73
D	15.0	14.643	232.90	104,530	150.52	112.73
D	16.0	15.124	240.54	107,960	155.46	112.73

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.727	33.915	15,222	21.919	154.49
D		.261	24.767	11,116	16.007	112.82
L		.430	28.082	12,604	18.149	127.92
F		.518	29.802	13,376	19.262	135.76
S		.190	23.368	10,488	15.103	106.45
K	0.12	1.906	37.424	16,797	24.187	155.62
D		.382	27.150	12,177	17.535	112.82
L		.583	31.072	13,946	20.082	129.21
F		.665	32.694	14,674	21.130	135.95
S		.322	25.965	11,653	16.704	107.97
K	0.15	2.147	42.162	18,923	27.249	156.81
D		1.545	30.334	13,615	19.605	112.82
L		.791	35.168	15,784	22.729	130.80
F		.864	36.606	16,430	23.659	136.15
S		.504	29.676	13,320	19.180	109.87
K	0.20	2.499	49.075	22,026	31.717	158.07
D		1.784	35.026	15,721	22.638	112.82
L		2.101	41.256	18,517	26.664	132.88
F		.156	42.329	18,999	27.358	136.34
S		1.777	34.884	15,657	22.546	112.36
K	0.30	3.087	60.609	27,203	39.172	159.40
D		2.185	42.898	19,254	27.726	112.82
L		.631	51.668	23,190	33.394	135.88
F		.656	52.145	23,404	.702	137.14
S		.246	44.097	19,792	28.500	115.97
K	0.40	3.580	70.291	31,548	45.429	160.10
D		2.523	49.534	22,232	32.015	112.82
L		3.087	60.612	27,204	39.175	138.05
F		.080	.477	27,144	.087	137.74
S		2.652	52.075	23,373	33.657	118.61
K	0.50	4.013	78.797	35,366	50.915	160.52
D		2.821	55.382	24,857	35.794	112.82
L		3.494	68.604	30,792	44.339	139.75
F		.454	67.817	30,438	43.840	138.15
S		.017	59.245	26,591	38.291	120.69
K	0.60	4.404	86.475	38,812	55.876	160.81
D		3.090	60.668	27,230	39.210	112.82
L		.866	75.908	34,070	49.060	141.16
F		.795	74.511	33,443	48.157	138.56
S		.353	65.829	29,546	42.546	122.42
K	0.70	4.763	93.523	41,976	60.445	161.02
D		3.337	65.528	29,411	42.352	112.82
L		4.192	82.690	37,122	53.443	142.37
F		.111	80.722	36,230	52.171	138.98
S		3.665	71.965	32,300	46.512	123.90

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	5.097	100.070	44,918	64.681	161.18
D		3.568	70.053	31,442	45.280	112.82
L		4.535	89.051	39,969	57.555	143.42
F		.408	86.557	38,849	55.942	139.40
S		3.959	77.739	34,892	50.244	125.20
K	0.90	5.410	106.230	47,649	68.658	161.30
D		3.784	74.302	33,349	48.020	112.82
L		4.842	95.065	42,668	61.442	144.35
F		.683	91.945	41,268	59.425	139.61
S		.238	83.215	37,349	53.782	126.35
K	1.0	5.707	112.040	50,289	72.417	161.40
D		3.989	78.321	35,152	50.620	112.82
L		5.133	100.790	45,238	65.142	145.19
F		4.944	99.325	44,580	64.195	139.82
S		.504	88.440	39,695	57.160	127.40
K	1.5	7.002	137.480	61,706	88.856	161.70
D		4.885	95.924	43,054	62.000	112.82
L		6.429	126.230	56,654	81.581	148.46
F		.101	119.790	53,767	77.425	140.90
S		5.694	111.800	50,179	72.257	131.49
K	2.0	8.093	158.89	71,318	102.690	161.85
D		5.641	110.76	49,714	71.590	112.82
L		7.542	148.08	66,461	95.704	150.83
F		.067	138.82	62,277	89.679	141.33
S		6.724	132.03	59,257	85.330	134.48
K	3.0	9.921	194.79	87,428	125.89	162.00
D		6.909	135.65	60,886	87.68	112.82
L		9.445	185.45	83,234	119.85	154.23
F		8.682	170.47	76,512	110.17	141.78
S		.500	166.89	74,907	107.86	138.80
K	4.0	11.460	225.03	101,000	145.43	162.08
D		7.978	156.64	70,305	101.24	112.82
L		11.080	217.55	97,643	140.61	156.69
F		10.088	198.08	88,906	128.02	142.67
S		.038	197.09	88,461	127.38	141.96
K	5.0	12.817	251.66	112,950	162.65	162.12
D		8.920	175.13	78,605	113.19	112.82
L		12.541	246.24	110,520	159.15	158.62
F		11.297	221.82	99,559	143.36	142.90
S		.420	224.22	100,640	144.92	144.44
K	6.0	14.043	275.73	123,750	178.21	162.15
D		9.771	191.85	86,107	123.99	112.82
L		13.876	272.45	122,280	176.09	160.22
F		12.415	243.76	109,410	157.55	143.35
S		.689	249.15	111,820	161.02	146.51

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	15.170	292.77	133,690	193.85	162.18
D		10.553	207.22	93,006	133.92	112.82
L		15.115	296.79	133,210	191.82	161.59
F		13.431	263.72	118,360	170.44	143.58
S		.871	272.37	122,250	176.03	148.29
D	8.0	11.282	221.52	99,428	143.17	112.82
F		14.358	281.93	126,540	182.21	143.58
S		.984	294.22	132,050	190.16	149.84
D	9.0	11.966	234.97	105,460	151.85	112.82
F		15.253	299.50	134,420	193.57	143.81
S		16.040	314.95	141,360	203.56	151.23
D	10.0	12.613	247.67	111,160	160.07	112.82
D	11.0	13.229	259.76	116,590	167.89	112.82
D	12.0	13.817	271.50	121,770	175.35	112.82
D	13.0	14.382	282.39	126,740	182.51	112.82
D	14.0	14.925	293.05	131,530	189.40	112.82
D	15.0	15.449	303.34	136,150	196.05	112 82

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.845	43.823	19,669	28.323	157.30
D		.324	31.456	14,118	20.330	112.91
L		.528	36.302	16,293	23.462	130.30
F		.612	38.318	17,198	24.765	137.54
S		.259	29.921	13,430	19.338	107.40
K	0.12	2.034	48.319	21,687	31.229	158.33
D		1.450	34.459	15,466	22.271	112.91
L		.691	40.168	18,028	25.961	131.62
F		.767	41.975	18,839	27.129	137.54
S		.399	33.247	14,922	21.488	108.94
K	0.15	2.289	54.393	24,413	35.236	159.41
D		1.622	38.526	17,291	24.900	112.91
L		.914	45.463	20,405	29.383	133.24
F		.978	46.999	21,095	30.376	137.74
S		.592	37.824	16,977	24.446	110.85
K	0.20	2.663	63.257	28,392	40.884	160.55
D		1.872	44.486	19,966	28.752	112.91
L		2.245	53.334	23,938	34.470	135.36
F		.291	54.431	24,431	35.180	138.15
S		1.880	44.667	20,048	28.868	113.37
K	0.30	3.285	78.053	35,032	50.446	161.75
D		2.293	54.484	24,454	35.213	112.91
L		.811	66.793	29,979	43.169	138.42
F		.827	67.163	30,145	43.408	139.19
S		.377	56.464	25,343	36.493	117.01
K	0.40	3.808	90.479	40,610	58.478	162.39
D		2.648	62.913	28,237	40.661	112.91
L		3.298	78.356	35,168	50.642	140.63
F		.272	77.906	34,966	50.352	139.82
S		2.806	66.679	29,928	43.095	119.67
K	0.50	4.268	101.400	45,511	65.536	162.74
D		2.961	70.339	31,570	45.461	112.91
L		3.733	88.687	39,805	57.319	142.36
F		.677	87.369	39,214	56.468	140.05
S		.193	75.860	34,048	49.029	121.77
K	0.60	4.683	111.260	49,936	71.907	163.03
D		3.243	77.053	34,583	49.800	112.91
L		4.130	98.130	44,043	63.422	143.79
F		.035	95.854	43,022	61.951	140.46
S		3.548	84.291	37,832	54.478	123.52
K	0.70	5.064	120.310	53,998	77.757	163.22
D		3.503	83.226	37,354	53.790	112.91
L		4.499	106.900	47,978	69.088	145.02
F		.365	103.690	46,541	67.018	140.68
S		3.879	92.147	41,358	59.555	125.02

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	5.418	128.730	57,777	83.199	163.36
D		3.745	88.973	39,933	57.504	112.91
L		4.845	115.120	51,669	74.403	146.09
F		.673	111.020	49,832	71.756	140.90
S		.201	99.805	44,795	64.505	126.66
K	0.90	5.751	136.630	61,324	88.306	163.48
D		3.972	94.369	42,355	60.991	112.91
L		5.173	122.890	55,158	79.427	147.04
F		4.972	118.120	53,016	76.343	141.33
S		.485	106.550	47,823	68.866	127.49
K	1.0	6.065	144.100	64,676	93.132	163.57
D		4.187	99.474	44,646	64.291	112.91
L		5.484	130.300	58,482	84.213	147.90
F		.257	124.900	56,060	80.725	141.78
S		4.766	113.250	50,827	73.190	128.54
K	1.5	7.441	176.78	79,342	114.250	163.83
D		5.128	121.83	54,681	78.741	112.91
L		6.868	163.18	73,239	105.460	151.23
F		.490	154.18	69,202	99.651	142.90
S		.025	143.15	64,251	92.521	132.67
K	2.0	8.599	204.29	91,692	132.040	163.97
D		5.921	140.67	63,140	90.922	112.91
L		8.057	191.43	85,917	123.720	153.64
F		7.518	178.60	80,163	115.430	143.35
S		.115	169.05	75,876	109.260	135.68
K	3.0	10.540	250.41	112,390	161.84	164.11
D		7.252	172.29	77,330	111.35	112.91
L		10.090	239.73	107,600	154.94	157.11
F		9.251	219.80	98,651	142.05	144.04
S		8.995	213.70	95,916	138.12	140.05
K	4.0	12.176	289.28	129,840	186.96	164.18
D		8.374	198.94	89,293	128.58	112.91
L		11.837	281.24	126,220	181.76	159.61
F		10.734	255.04	114,460	164.83	144.74
S		.622	252.37	113,270	163.11	143.23
K	5.0	13.616	323.50	145,200	209.08	164.22
D		9.362	222.43	99,834	143.76	112.91
L		13.398	318.32	142,870	205.73	161.58
F		12.041	286.08	128,400	184.89	145.22
S		.084	287.11	128,860	185.56	145.74
K	6.0	14.918	354.43	159,080	229.07	164.24
D		10.255	243.56	109,360	157.48	112.91
L		14.824	352.21	158,080	227.63	163.21
F		13.190	313.38	140,650	202.54	145.22
S		.427	319.02	143,180	206.18	147.83

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	7.0	16.115	382.88	171,850	247.46	164.26
D		11.077	263.18	118,120	170.09	112.91
L		16.149	383.67	172,210	247.97	164.60
F		14.271	339.05	152,170	219.13	145.46
S		.679	348.75	156,530	225.40	149.62
D	8.0	11.842	281.35	126,280	181.84	112.91
F		15.256	362.46	162,680	234.27	145.46
S		.857	376.73	169,090	243.48	151.18
D	9.0	12.561	298.42	133,940	192.87	112.91
D	10.0	13.240	314.56	141,180	203.30	112.91
D	11.0	13.884	329.88	148,060	213.20	112.91
D	12.0	14.503	344.59	154,660	222.71	112.91
D	13.0	15.096	358.66	160,970	231.80	112.91

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	1.957	55.345	24,840	35.771	156.20
D		.381	39.120	17,560	25.290	112.99
L		.623	45.891	20,597	29.660	132.54
F		.712	48.413	21,729	31.290	139.82
S		.318	37.274	16,729	24.090	107.65
K	0.12	2.157	60.982	27,370	39.414	160.77
D		1.516	42.860	19,236	27.700	112.99
L		.796	50.778	22,791	32.819	133.87
F		.876	53.033	23,803	34.276	139.82
S		.465	41.426	18,593	26.774	109.22
K	0.15	2.426	68.596	30,788	44.335	161.75
D		1.695	47.870	21,507	30.970	112.99
L		2.033	57.472	25,795	37.145	135.53
F		.097	59.294	26,613	38.322	139.82
S		1.666	47.118	21,148	30.452	111.11
K	0.20	2.826	79.897	35,860	51.639	163.16
D		1.957	55.330	24,834	35.760	112.99
L		2.385	67.422	30,261	43.575	137.68
F		.425	68.572	30,777	44.319	140.04
S		1.968	55.642	24,974	35.879	113.63
K	0.30	3.476	98.279	44,110	63.520	163.87
D		2.397	67.770	30,415	43.800	112.99
L		.986	84.436	37,897	54.572	140.79
F		3.003	.893	38,102	.867	141.55
S		2.488	70.337	31,569	45.459	117.28
K	0.40	4.028	113.880	51,112	73.602	164.44
D		2.768	78.250	35,120	50.570	112.99
L		3.503	99.054	44,458	64.019	143.04
F		.472	98.180	44,066	63.454	141.78
S		2.938	83.063	37,281	53.684	119.94
K	0.50	4.512	127.59	57,265	82.274	164.78
D		3.094	87.49	39,266	56.540	112.99
L		.965	112.11	50,320	72.461	144.81
F		.888	109.94	49,345	71.056	142.00
S		.342	94.50	42,414	61.076	122.05
K	0.60	4.950	139.97	62,822	90.465	165.02
D		3.390	95.84	43,014	61.940	112.99
L		4.387	124.05	55,677	80.175	146.26
F		.273	120.81	54,224	78.082	142.44
S		3.713	104.99	47,123	67.856	123.79
K	0.70	5.352	151.34	67,923	97.812	165.19
D		3.661	103.51	46,460	66.900	112.99
L		4.779	135.13	60,651	87.338	147.51
F		.631	130.91	58,754	84.606	142.90
S		.060	114.79	51,519	74.188	125.30

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	5.726	161.90	72,669	104.640	165.32
D		3.959	111.94	50,243	72.350	112.99
L		5.147	145.53	65,318	94.057	148.60
F		4.965	140.39	63,011	90.736	143.35
S		.386	123.99	55,653	80.140	126.61
K	0.90	6.077	171.84	77,123	111.320	165.42
D		4.150	117.37	52,680	75.860	112.99
L		5.495	155.36	69,728	100.410	149.56
F		.275	149.15	66,941	96.394	143.58
S		4.696	132.73	59,575	85.787	127.78
K	1.0	6.409	181.22	81,336	117.130	165.50
D		4.376	123.72	55,530	79.960	112.99
L		5.826	164.71	73,928	106.450	150.43
F		.569	157.46	70,674	101.770	143.81
S		4.989	141.07	63,315	91.174	128.84
K	1.5	7.861	222.28	99,763	143.66	165.74
D		5.359	151.53	68,011	97.94	112.99
L		7.296	206.28	92,585	133.32	153.82
F		6.843	193.48	86,838	125.05	144.26
S		.307	178.32	80,037	115.25	132.97
K	2.0	9.084	256.85	115,280	166.01	165.87
D		6.188	174.97	78,533	113.08	112.99
L		8.559	241.99	108,610	156.40	156.27
F		7.953	224.87	100,930	145.34	145.22
S		.448	210.59	94,519	136.11	136.00
K	3.0	11.108	314.08	140,970	203.00	165.99
D		7.579	214.29	96,181	138.50	112.99
L		10.718	303.06	136,020	195.87	159.80
F		9.805	277.23	124,430	179.18	146.18
S		.415	266.21	119,480	172.05	140.37
K	4.0	12.861	363.64	163,210	235.03	166.05
D		8.752	247.44	111,060	159.92	112.99
L		12.574	355.52	159,570	229.78	162.35
F		11.341	320.65	143,910	207.24	146.43
S		.119	314.37	141,100	203.18	143.56
K	5.0	14.384	406.70	182,540	262.85	166.09
D		9.785	276.65	124,170	178.80	112.99
L		14.232	402.40	180,610	260.08	164.35
F		12.701	359.11	161,170	232.09	146.67
S		.649	357.65	160,530	231.15	146.08
K	6.0	15.759	445.57	199,990	287.98	166.11
D		10.718	303.06	136,020	195.87	112.99
L		15.747	445.24	199,840	287.77	166.01
F		13.963	394.03	176,850	254.67	146.91
S		14.055	397.40	178,360	256.85	148.17

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
D	7.0	11.550	327.34	146,920	211.56	112.99
F		15.078	426.31	191,340	275.53	147.16
S		.365	434.44	194,990	280.78	149.96
D	8.0	12.520	354.00	158,880	228.79	112.99
D	9.0	13.127	371.25	166,590	239.89	112.99
D	10.0	13.805	391.24	175,600	252.86	112.99
D	11.0	14.513	410.34	184,170	265.21	112.99
D	12.0	15.158	428.59	192,360	277.00	112.99

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	2.067	68.590	30,785	44.321	162.15
D		1.441	47.820	21,462	30.910	113.04
L		.716	56.935	25,554	36.798	134.60
F		.810	60.065	26,960	38.821	142.00
S		.377	45.692	20,508	29.531	108.02
K	0.12	2.276	75.527	33,899	48.815	162.99
D		1.579	52.380	23,510	33.850	113.04
L		.899	63.000	28,276	40.717	135.95
F		.983	65.799	29,533	42.527	142.00
S		.530	51.005	22,787	32.813	109.57
K	0.15	2.559	84.901	38,106	54.873	163.87
D		1.765	58.570	26,285	37.850	113.04
L		2.149	71.305	32,003	46.085	137.63
F		.220	73.682	33,071	47.621	142.22
S		1.741	57.759	25,924	37.330	111.49
K	0.20	2.971	98.592	44,251	63.722	164.80
D		1.038	67.630	30,352	43.810	113.04
L		.521	83.649	37,544	54.063	139.83
F		.564	85.081	38,187	54.988	142.22
S		.056	68.209	30,607	44.074	114.02
K	0.30	3.660	121.470	54,517	78.506	165.78
D		2.496	82.840	37,181	53.540	113.04
L		3.157	104.760	47,018	67.706	142.98
F		.175	105.370	47,291	68.099	143.81
S		2.598	86.224	38,700	55.728	117.69
K	0.40	4.240	140.75	63,145	90.931	166.30
D		2.882	95.64	42,924	61.810	113.04
L		3.704	122.89	55,158	79.427	145.26
F		.672	121.86	54,695	78.761	144.04
S		.069	101.82	45,701	65.810	120.36
K	0.50	4.749	157.59	70,731	101.860	166.61
D		3.222	106.92	47,991	69.110	113.04
L		4.192	139.10	62,431	89.900	147.05
F		.119	136.69	61,351	88.345	144.51
S		3.491	115.84	51,994	74.870	122.47
K	0.60	5.209	172.85	77,580	111.720	166.82
D		3.530	117.13	52,571	75.700	113.04
L		4.638	153.91	69,078	99.472	148.53
F		.535	150.47	67,535	97.250	145.22
S		3.879	128.71	57,771	83.190	124.22
K	0.70	5.631	186.87	83,871	120.780	166.97
D		3.813	126.51	56,783	81.770	113.04
L		5.052	167.65	75,249	108.360	149.80
F		4.906	162.79	73,067	105.220	145.46
S		.240	140.71	63,156	90.943	125.73

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	6.025	199.91	89,726	129.20	167.08
D		4.076	135.28	60,718	87.45	113.04
L		5.441	180.56	81,040	116.84	150.91
F		.253	174.32	78,240	112.67	145.70
S		4.581	152.01	68,225	98.24	127.05
K	0.90	6.408	212.64	95'438	137.43	167.17
D		4.323	143.45	64,385	92.72	113.04
L		5.809	192.75	86,511	124.57	151.89
F		.581	185.20	83,123	119.70	145.94
S		4.904	162.71	73,030	105.16	128.22
K	1.0	6.742	223.72	100,410	144.60	167.25
D		4.557	151.21	67,869	97.73	113.04
L		6.158	204.36	91,721	132.08	152.77
F		5.893	195.54	87,765	126.38	146.18
S		.211	173.33	77,616	111.76	129.28
K	1.5	8.268	274.36	123,140	177.33	167.46
D		5.581	185.20	83,122	119.69	113.04
L		7.713	255.93	114,870	165.41	156.21
F		.253	240.69	108,030	155.56	146.91
S		6.588	218.60	98,116	141.29	133.43
K	2.0	9.553	317.02	142,290	204.90	167.57
D		6.445	213.83	95,973	138.20	113.04
L		9.048	300.24	134,750	194.04	158.71
F		8.461	280.77	126,020	181.46	148.41
S		7.780	258.16	115,870	166.85	136.46
K	3.0	11.708	388.51	174,370	251.10	167.68
D		7.893	261.91	117,550	169.28	113.04
L		11.331	376.00	168,760	243.01	162.28
F		10.381	344.46	154,600	222.63	148.67
S		9.834	326.33	146,470	210.91	140.85
K	4.0	13.524	448.77	201,420	290.05	167.74
D		9.114	302.42	135,730	195.46	113.04
L		13.292	441.09	197,970	285.08	164.87
F		12.007	398.43	178,820	257.51	148.86
S		11.613	385.38	172,970	249.07	144.05
K	5.0	15.123	501.83	225,241	324.35	167.77
D		10.189	338.12	151,760	218.53	113.04
L		15.045	499.25	224,080	322.67	166.91
F		13.448	446.23	200,280	288.40	149.18
S		.213	438.43	196,780	283.36	146.58
D	6.0	11.162	370.40	166,240	239.39	113.04
F		14.757	489.68	219,780	316.48	149.44
S		.681	487.16	218,650	314.86	148.68

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			*c*
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
D	7.0	12.056	400.07	179,560	258.57	113.04
F		15.966	529.82	237,800	342.43	149.70
S		16.049	532.56	239,030	344.20	150.48
D	8.0	12.889	427.70	191,960	276.42	113.04
D	9.0	13.670	453.63	203,600	293.19	113.04
D	10.0	14.410	478.17	214,620	309.05	113.04
D	11.0	15.113	501.52	225,090	324.13	113.04

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	2.173	83.626	37,534	54.049	164.26
D		1.496	57.580	25,842	37.210	113.09
L		.806	69.519	31,202	44.930	136.55
F		.909	73.452	32,967	47.472	144.26
S		.437	55.333	24,823	35.745	108.63
K	0.12	2.391	92.030	41,306	59.481	165.02
D		1.639	63.070	28,308	40.760	113.09
L		.998	76.922	34,525	49.715	137.93
F		2.094	80.594	36,173	52.088	144.51
S		1.597	61.454	27,582	39.718	110.19
K	0.15	2.687	103.390	46,404	66.823	165.81
D		1.832	70.520	31,650	45.580	113.09
L		2.262	87.062	39,076	56.269	139.63
F		.345	90.253	40,508	58.332	144.74
S		1.817	69.915	31,380	45.187	112.13
K	0.20	3.118	119.980	53,852	77.548	166.65
D		2.116	81.430	36,547	52.630	113.09
L		.654	102.130	45,841	66.010	141.85
F		.717	104.550	46,928	67.576	145.22
S		.145	82.752	37,056	53.361	114.67
K	0.30	3.839	147.72	66,303	95.477	167.53
D		2.591	99.73	44,760	64.450	113.09
L		3.324	127.91	57,409	82.668	145.05
F		.349	128.90	57,855	83.311	146.18
S		2.712	104.37	46,844	67.455	118.36
K	0.40	4.444	171.04	76,768	110.550	167.98
D		2.992	115.15	51,684	74.430	113.09
L		3.899	150.05	67,347	96.980	147.37
F		.881	149.34	67,029	96.521	146.67
S		.203	123.25	55,319	79.658	121.04
K	0.50	4.977	191.55	85,973	123.800	168.26
D		3.345	128.74	57,785	83.210	113.09
L		4.413	169.84	76,227	109.760	149.19
F		.353	167.53	75,192	108.280	147.16
S		3.644	140.22	62,935	90.625	123.17
K	0.60	5.459	210.07	94,284	135.772	168.45
D		3.665	141.03	63,301	91.153	113.09
L		4.883	187.92	84,343	121.453	150.69
F		.777	183.83	82,509	118.812	147.41
S		.049	155.81	69,930	100.698	124.94
K	0.70	5.901	227.08	101,920	146.767	168.59
D		3.958	152.33	68,372	98.455	113.09
L		5.319	204.70	91,877	132.303	152.01
F		.168	198.89	89,269	128.546	147.66
S		4.426	170.33	76,447	110.083	126.45

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	6.312	242.90	109,020	156.99	168.69
D		4.232	162.85	73,093	105.25	113.09
L		5.728	220.46	98,946	142.48	153.09
F		.534	212.99	95,596	137.66	147.91
S		4.781	183.99	82,581	118.92	127.77
K	0.90	6.698	257.76	115,690	166.60	168.77
D		4.488	172.73	77,526	111.63	113.09
L		6.115	235.34	105,620	152.10	154.09
F		5.880	226.29	101,560	146.26	148.16
S		.118	196.95	88,398	127.29	128.95
K	1.0	7.063	271.81	122,000	175.68	168.83
D		4.731	182.07	81,720	117.67	113.09
L		6.484	249.52	111,730	161.26	154.98
F		.209	238.94	107,240	154.43	148.41
S		5.439	209.32	93,949	135.28	130.02
K	1.5	8.660	333.29	149,590	215.41	169.03
D		5.445	222.99	100,080	144.12	113.09
L		8.120	312.49	140,250	201.96	158.48
F		7.670	295.18	132,490	190.78	149.70
S		6.876	264.61	118,760	171.03	134.19
K	2.0	10.006	385.06	172,830	248.87	169.12
D		6.691	257.49	115,570	166.42	113.09
L		9.525	366.58	164,530	236.93	161.00
F		8.919	343.25	154,060	221.85	150.76
S		.120	312.48	140,250	201.96	137.24
K	3.0	12.261	471.88	211,790	304.99	169.22
D		8.195	315.36	141,540	203.82	113.09
L		11.929	459.09	206,050	296.72	164.64
F		10.963	421.88	189,350	272.67	151.29
S		.264	395.01	177,290	255.30	141.66
K	4.0	14.163	545.04	244,630	352.27	169.27
D		9.462	364.15	163,440	235.35	113.09
L		13.994	538.57	241,720	348.08	167.26
F		12.681	488.01	219,030	315.41	151.56
S		.179	468.72	210,370	302.94	145.57
K	5.0	15.837	609.48	273,550	393.92	169.30
D		10.579	407.13	182,730	263.13	113.09
L		15.839	609.58	273,600	393.97	169.33
F		14.203	546.60	245,330	353.27	151.83
S		13.789	530.69	238,190	342.99	147.42
D	6.0	11.589	445.99	200,170	288.25	113.09
F		15.587	599.84	269,230	387.69	152.11
S		15.322	589.67	264,660	381.11	149.53
D	7.0	12.517	481.72	216,210	311.34	113.09
D	8.0	13.381	514.99	231,140	332.84	113.09
D	9.0	14.193	546.22	245,160	353.02	113.09
D	10.0	14.961	575.77	258,420	372.13	113.09
D	11.0	15.691	603.88	271,040	390.29	113.09

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	2.276	100.550	45,127	64.983	166.20
D		1.549	68.440	30,718	44.230	113.14
L		.895	83.716	37,574	54.107	138.39
F		2.022	89.324	40,091	57.731	147.66
S		1.496	66.103	29,669	42.723	109.28
K	0.12	2.508	110.820	49,738	71.623	166.88
D		1.697	74.970	33,650	48.460	113.14
L		2.097	92.632	41,576	59.869	139.78
F		.219	98.017	43,993	63.349	147.91
S		1.663	73.450	32,967	47.471	110.84
K	0.15	2.811	124.170	55,732	80.253	167.59
D		1.942	83.820	37,622	54.180	113.14
L		2.373	104.840	47,057	67.761	141.51
F		.485	109.770	49,270	70.948	148.16
S		1.891	83.562	37,504	54.006	112.78
K	0.20	3.260	144.02	64,640	93.081	168.34
D		2.191	96.79	43,443	62.560	113.14
L		.784	122.99	55,203	79.491	143.76
F		.884	127.41	57,185	82.346	148.86
S		.234	98.68	44,290	63.778	115.35
K	0.30	4.011	177.20	79,534	114.530	169.12
D		2.683	118.54	53,206	76.620	113.14
L		3.487	154.03	69,134	99.552	147.01
F		.544	156.58	70,280	101.200	149.44
S		2.824	124.74	55,987	80.621	119.05
K	0.40	4.643	205.11	92,060	132.570	169.53
D		3.098	136.88	61,437	88.470	113.14
L		4.090	180.70	81,102	116.790	149.35
F		.107	181.44	81,435	117.270	149.97
S		3.334	147.31	66.117	95.207	121.75
K	0.50	5.198	229.66	103,080	148.43	169.77
D		3.464	153.04	68,689	198.91	113.14
L		4.630	204.52	92,645	132.19	151.20
F		.600	203.21	91,210	131.34	150.23
S		3.794	167.59	74,702	108.31	123.89
K	0.60	5.700	251.83	113.030	162.76	169.94
D		3.795	167.64	75.245	108.35	113.14
L		5.122	226.30	101,570	146.26	152.72
F		.057	223.39	100.260	144.38	150.76
S		4.215	186.22	83,580	120.35	125.38
K	0.70	6.161	272.20	122,170	175.92	170.06
D		4.185	181.08	81.273	117.03	113.14
L		5.580	246.51	110,640	159.32	154.02
F		.472	241.72	108,490	156.22	151.03
S		4.608	203.57	91,369	131.57	127.19

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	6.590	291.14	130,670	188.16	170.15
D		4.382	193.58	86,886	125.11	113.14
L		6.009	265.48	119,150	171.58	155.16
F		5.860	258.87	116,190	167.31	151.29
S		4.978	219.91	98,701	142.13	128.52
K	0.90	6.993	308.94	138,660	199.67	170.23
D		4.648	205.32	92,155	132.70	113.14
L		6.415	283.41	127,200	183.17	156.16
F		.226	275.06	123,450	177.77	151.56
S		5.328	235.40	105,650	152.14	129.71
K	1.0	7.373	325.75	146,210	210.54	170.28
D		4.899	216.43	97,141	139.88	113.14
L		6.802	300.48	134,860	194.20	157.07
F		.575	290.46	130,370	187.72	151.83
S		5.663	250.18	112,290	161.70	130.78
K	1.5	9.040	399.38	179,260	258.13	170.46
D		6.000	265.07	118,970	171.32	113.14
L		8.518	376.31	168,900	243.21	160.61
F		.111	358.32	160,820	231.58	152.94
S		7.159	316.26	141,950	204.40	134.98
K	2.0	10.444	461.39	207,090	298.21	170.54
D		6.928	306.08	137,370	197.82	113.14
L		9.992	441.45	198,130	285.31	163.17
F		.417	416.03	186,720	268.88	153.78
S		8.454	373.47	167,620	241.38	138.05
K	3.0	12.798	565.38	253,760	365.41	170.63
D		8.485	374.87	168,250	242.28	113.14
L		12.514	552.85	248,140	357.32	166.85
F		11.554	510.46	229,110	329.91	154.06
S		10.686	472.12	211,900	305.13	142.49
K	4.0	14.781	653.01	293,090	422.05	170.67
D		9.798	432.86	194,280	279.76	113.14
L		14.680	648.56	291,090	419.17	169.52
F		13.367	590.51	265,040	381.65	154.35
S		12.620	557.53	250,230	360.34	145.72
K	5.0	16.528	730.20	327,730	471.93	170.70
D		10.954	483.96	217,210	312.78	113.14
L		16.616	734.08	329,470	474.44	171.61
F		14.972	661.45	296,880	427.50	154.63
S		.357	634.28	284,660	409.94	148.28
D	6.0	12.000	530.15	237,940	342.64	113.14
F		16.432	725.94	325,820	469.18	154.92
S		15.953	704.77	316,320	455.50	150.40
D	7.0	12.961	572.62	257,010	370.09	113.14
D	8.0	14.017	619.25	277,940	400.23	113.14
D	9.0	14.697	649.29	291,420	419.64	113.14
D	10.0	15.492	684.41	307,180	442.34	113.14

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			C
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	2.374	119.340	53,561	77.128	167.87
D		1.600	80.450	36,110	52.000	113.18
L		.982	99.614	44,710	64.381	140.13
F		2.135	107.360	48,857	69.387	151.03
S		1.547	77.768	34,904	50.262	109.40
K	0.12	2.612	131.290	58,928	84.856	168.60
D		1.753	88.130	39,556	56.960	113.18
L		2.193	110.220	49,471	71.238	141.54
F		.344	117.820	52,878	76.145	151.29
S		1.696	86.503	38,825	55.908	111.08
K	0.15	2.931	147.350	66,132	95.229	169.24
D		1.960	98.540	44,226	63.690	113.18
L		2.482	124.750	55,993	80.629	143.29
F		.621	131.720	59,121	85.134	151.29
S		1.956	98.308	44,123	63.537	112.91
K	0.20	3.398	170.80	76,660	110.390	169.90
D		2.264	113.78	51,068	73.540	113.18
L		.912	146.35	65,686	94.369	145.57
F		3.042	152.92	68,634	98.833	152.11
S		2.309	116.08	52,099	75.022	115.46
K	0.30	4.179	210.04	94,269	135.75	170.58
D		2.772	139.35	62,544	90.06	113.18
L		3.646	183.28	82,263	118.46	148.86
F		.746	188.30	84,517	121.70	152.94
S		2.920	146.76	65,869	94.85	119.19
K	0.40	4.835	243.04	109,080	157.08	170.95
D		3.201	160.90	72,220	103.99	113.18
L		4.278	215.51	96,503	138.96	151.23
F		.334	217.83	97,769	140.78	153.21
S		3.448	173.31	77,786	112.01	121.90
K	0.50	5.400	272.08	122,120	175.85	171.17
D		3.579	179.90	80,745	116.27	113.18
L		4.842	243.36	109,230	157.29	153.10
F		.854	243.99	109,510	157.69	153.49
S		3.923	197.16	88,493	127.43	124.04
K	0.60	5.935	298.31	133,890	192.80	171.32
D		3.921	197.07	88,452	127.37	113.18
L		5.357	269.28	120,860	174.03	154.64
F		.337	268.26	120,410	173.38	154.06
S		4.358	219.08	98,329	141.59	125.81
K	0.70	6.414	322.41	144,710	208.38	171.42
D		4.235	212.86	95,539	137.57	113.18
L		5.836	293.33	131,650	189.57	155.96
F		.786	290.83	130,530	188.18	154.63
S		4.765	239.50	107,490	154.79	127.34

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.80	6.860	345.63	155,130	223.39	171.51
D		4.527	227.56	102,130	147.07	113.18
L		6.285	315.90	141,780	204.16	157.11
F		.197	311.50	139,810	201.32	154.92
S		5.147	258.72	116,120	167.21	128.67
K	0.90	7.279	365.88	164,220	236.47	171.56
D		4.802	241.36	108,330	155.99	113.18
L		6.709	337.23	151,360	217.95	158.13
F		.584	330.93	148,530	213.88	155.17
S		5.510	276.94	124,300	179.41	129.86
K	1.0	7.675	385.79	173,150	249.34	171.62
D		5.062	254.41	114,190	164.43	113.18
L		7.113	357.55	160,470	231.08	159.05
F		6.954	349.56	156,890	225.92	155.50
S		5.856	294.33	132,110	190.23	130.93
K	1.5	9.409	472.92	212,260	305.65	171.77
D		6.199	311.60	139,850	201.39	113.18
L		8.908	447.77	200,970	289.39	162.63
F		.566	430.56	193,250	278.27	156.38
S		7.402	372.08	167,000	240.48	135.14
K	2.0	10.869	546.32	245,210	353.09	171.85
D		7.158	359.80	161,490	232.54	113.18
L		10.450	525.28	235,760	339.49	165.23
F		9.929	499.07	224,000	322.55	156.98
S		8.741	439.39	197,210	283.98	138.21
K	3.0	13.318	669.41	300,450	432.64	171.93
D		8.767	440.66	197,780	284.80	113.18
L		13.087	657.84	295,260	425.17	168.95
F		12.183	612.40	274,870	395.80	157.28
S		11.050	555.43	249,290	358.98	142.65
K	4.0	15.381	773.14	347,010	499.69	171.97
D		10.123	508.83	228,380	328.87	113.18
L		15.353	771.72	346,370	498.77	171.65
F		14.095	708.50	318,000	457.91	157.59
S		13.049	655.92	294,390	423.93	145.89
D	5.0	11.318	568.90	255,340	367.68	113.18
F		15.789	793.67	356,220	512.96	157.89
S		14.846	746.23	334,930	482.29	148.45
D	6.0	12.398	623.20	279,710	402.78	113.18
S		16.496	829.16	372,150	535.90	150.58
D	7.0	13.391	673.13	302,120	435.05	113.18
D	8.0	14.316	719.61	322,980	465.09	113.18
D	9.0	15.184	763.25	342,570	493.29	113.18

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	2.569	163.41	73,342	105.610	171.24
D		1.699	108.06	48,502	69.840	113.24
L		2.151	136.81	61,406	88.424	143.37
S		1.658	105.47	47,340	68.169	110.53
K	0.12	2.821	179.48	80,556	116.000	171.70
D		1.861	118.37	53,131	76.510	113.24
L		2.360	151.39	67,945	97.841	144.81
S		1.842	117.20	52,602	75.746	112.11
K	0.15	3.163	201.23	90,319	130.060	172.18
D		2.080	132.35	59,953	85.540	113.24
L		.693	171.34	76,902	110.740	146.60
S		.096	133.33	59,844	86.175	114.08
K	0.20	3.663	233.05	104,600	150.62	172.68
D		2.402	152.82	68,593	98.77	113.24
L		3.160	201.00	90,215	129.91	148.94
S		2.475	157.45	70,671	101.77	116.67
K	0.30	4.500	286.29	128,500	185.03	173.21
D		2.942	187.17	84,008	120.97	113.24
L		3.957	251.73	112,980	162.69	152.30
S		.129	199.04	89,335	128.64	120.42
K	0.40	5.205	331.11	148,610	214.00	173.49
D		3.397	216.12	97,004	139.68	113.24
L		4.642	295.30	132,540	190.86	154.73
S		3.695	235.05	105,500	151.91	123.16
K	0.50	5.825	370.54	166,310	239.49	173.66
D		3.798	241.64	108,450	156.17	113.24
L		5.254	334.24	150,020	216.02	156.64
S		4.203	267.41	120,020	172.83	125.32
K	0.60	6.385	406.18	182,310	262.52	173.77
D		4.161	264.70	118,800	171.08	113.24
L		5.813	369.83	165,990	239.02	158.21
S		4.671	297.13	133,360	192.04	127.11
K	0.70	6.899	438.92	197,000	283.69	173.85
D		4.494	285.91	128,320	184.78	113.24
L		6.333	402.87	180,820	260.38	159.56
S		5.106	324.83	145,790	209.94	128.65
K	0.80	7.379	469.40	210,680	303.38	173.91
D		4.805	305.65	137,180	197.54	113.24
L		6.820	433.86	194,730	280.41	160.74
S		5.516	350.89	157,490	226.78	130.00
K	0.90	7.828	498.01	223,520	321.88	173.96
D		5.096	324.19	145,500	209.52	113.24
L		7.280	463.16	207,880	299.34	161.78
S		5.904	375.60	168,580	242.76	131.20

For-mula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	1.0	8.253	525.06	235,660	339.36	174.00
D		5.372	341.72	153,370	220.86	113.24
L		7.719	491.06	220,400	317.37	162.73
S		6.275	399.20	179,170	258.01	132.29
K	1.5	10.115	643.50	288,820	415.92	174.11
D		6.579	418.53	187,840	270.50	113.24
L		9.667	614.98	276,020	397.47	166.39
S		7.932	504.63	226,490	325.94	136.54
K	2.0	11.684	743.29	333,610	480.41	174.17
D		7.597	483.28	216,910	312.34	113.24
L		11.340	721.44	323,800	466.27	169.05
S		9.367	595.92	267,470	385.15	139.64
K	3.0	14.314	910.65	408,720	588.57	174.23
D		9.304	591.88	265,650	382.54	113.24
L		14.202	903.50	405,520	583.94	172.86
S		11.841	753.30	338,100	486.87	144.12
K	4.0	16.532	1051.73	472,040	679.75	174.26
D		10.743	683.45	306,750	441.72	113.24
L		16.660	1059.90	475,720	686.61	175.62
S		13.983	889.61	399,280	574.96	147.40
D	5.0	12.011	764.13	342,960	493.86	113.24
S		15.908	1012.10	454,240	654.11	149.98
D	6.0	13.157	837.06	375,690	541.00	113.24
D	7.0	14.211	904.13	405,790	584.34	113.24
D	8.0	15.193	956.56	433,820	624.69	113.24

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	0.10	2.752	216.16	97,020	139.71	174.07
D		1.791	140.69	63,146	90.93	113.30
L		2.314	181.72	81,561	117.45	146.33
S		1.755	137.82	61,857	89.07	110.98
K	0.12	3.021	237.25	106,480	153.34	174.40
D		1.962	154.12	69,173	99.61	113.30
L		2.560	201.07	90,246	129.96	147.81
S		1.950	153.14	68,732	98.97	112.57
K	0.15	3.384	265.79	119,290	171.78	174.75
D		2.194	172.31	77,339	111.36	113.30
L		.898	227.58	102,140	147.09	149.63
S		.218	174.22	78,195	112.60	114.55
K	0.20	3.916	307.54	138,030	198.77	175.11
D		2.533	198.97	89,304	128.59	113.30
L		3.399	266.97	119,820	172.55	152.01
S		2.620	205.74	92,342	132.97	117.15
K	0.30	4.806	377.48	169,420	243.97	175.50
D		3.103	243.68	109,370	157.49	113.30
L		4.257	334.35	150,060	216.09	155.45
S		3.312	260.08	116,730	168.09	120.92
K	0.40	5.556	436.37	195,850	282.03	175.70
D		3.583	281.38	126,290	181.86	113.30
L		4.994	392.23	176,040	253.50	157.93
S		3.911	307.14	137,850	198.50	123.66
K	0.50	6.216	488.21	219,120	315.54	175.81
D		4.006	314.60	141,200	203.33	113.30
L		5.653	443.95	199,250	286.93	159.91
S		4.450	349.42	156,830	225.83	125.83
K	0.60	6.813	535.06	240,150	345.82	175.90
D		4.388	344.62	154,670	222.73	113.30
L		6.254	491.21	220,470	317.48	161.48
S		4.943	388.25	174,260	250.93	127.64
K	0.70	7.361	578.11	259,470	373.63	175.95
D		4.739	372.23	167,070	240.58	113.30
L		6.813	535.10	240,170	345.84	162.86
S		5.347	419.93	188,480	271.41	127.81
K	0.80	7.871	618.18	277,460	399.54	176.00
D		5.067	397.94	178,600	257.19	113.30
L		7.337	576.26	258,640	372.45	164.06
S		5.838	458.48	205,790	296.33	130.53
K	0.90	8.350	655.80	294,340	423.86	176.03
D		5.374	422.07	189,430	272.79	113.30
L		7.833	615.18	276,110	397.59	165.13
S		6.249	490.80	220,280	317.21	131.74

Formula.	Fall per 1000 Feet.	Mean Velocity in Feet per Sec.	Discharge.			c
			Cu. Feet per Sec.	U. S. Gallons per Min.	Million Gallons per 24 Hours.	
K	1.0	8.803	691.39	310,320	446.86	176.06
D		5.665	444.90	199,680	287.54	113.30
L		8.304	252.23	292,740	421.54	166.09
S		6.641	521.62	234,120	337.13	132.83
K	1.5	10.787	847.19	380,240	547.56	176.14
D		6.938	544.90	244,560	352.17	113.30
L		10.400	816.83	366,620	527.92	169.83
S		8.396	659.39	295,950	426.17	137.10
K	2.0	12.458	978.48	439,170	632.42	176.18
D		8.011	629.20	282,400	406.65	113.30
L		12.201	958.23	430,080	619.31	172.54
S		9.914	778.67	349,490	503.26	140.21
K	3.0	15.262	1198.70	537,990	774.71	176.23
D		9.812	770.60	345,860	498.04	113.30
L		15.279	1200.10	538,620	775.61	173.43
S		12.533	984.33	441,800	638.18	144.72
D	4.0	11.329	889.81	399,370	575.09	113.30
S		14.800	1162.41	521,720	751.28	148.00
D	5.0	12.666	994.85	446,520	642.98	113.30
S		16.838	1322.40	593,560	854.71	150.60
D	6.0	13.875	1089.80	489,130	704.35	113.30
D	7.0	14.987	1177.10	528,320	760.78	113.30
D	8.0	16.022	1258.40	564,810	813.31	113.30

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