ANNUAL REPORT

OF THE

WATER BOARD

OF

BROOKLINE

MASSACHUSETTS

FOR THE YEAR ENDING DECEMBER 31

1931

BOSTON:
CHAPPLE PUBLISHING COMPANY, LTD.
1932

WATER BOARD

Organization, 1931

TIMOTHY J. BURKE, *Chairman* ..... Term expires, 1934
GEORGE H. FRANCIS, M.D. ..... Term expires, 1932
FRANCIS W. HAMILTON ..... Term expires, 1933

ZEPH R. FORBES, *Registrar and Clerk*
FAYETTE F. FORBES, *Superintendent of Works*
WALTER B. BUSHWAY, *Assistant Superintendent of Works*
RICHARD J. FLINN, *Engineer of Low Service*
LEWIS A. GOLDSMITH, *Engineer of High Service*

REPORT

The Water Board herewith submits its 56th annual report for the year ending December 31, 1931. At the annual Town meeting held March 3, 1931, Mr. Timothy J. Burke was re-elected a member of the Board for three years. The Board organized appointing Mr. Timothy J. Burke, Chairman, Z. R. Forbes, Registrar and Clerk, and F. F. Forbes, Superintendent of the Works.

The force mains in Newton Street between Clyde and South Streets have been relaid in conformity with the newly established lines and grade. Such other changes and renewals in street mains and service pipes as were made necessary on account of municipal improvements have received the prompt attention of the Department.

Short extensions of mains have been made in various streets, details of which will be found in the report of the Superintendent.

In addition to the routine work of the Department much has been accomplished during the past year towards the general improvement of the plant. The old wooden building at our storage yard Pearl Street, has been torn down and the grounds graded and fenced. The new building has been equipped with an oil burner and the windows with galvanized iron screens. This expenditure for screening was found to be absolutely necessary owing, possibly to the close proximity of the building to the Brookline Avenue playground.

A new chimney has been erected at the Low Service Station and the old chimney torn down. A proper draught is now assured for the four boilers now in service resulting in a better coal combustion together with an increased generation of steam which will be of especial value during periods of high pumpage. There is also a noticeable decrease in the amount of smoke emitted.

An eight inch main has been laid in Fairmount Street and connected with the high service system at the junction of Dudley and Lee Streets. This replaces the old two inch main and greatly improves the water supply both for domestic service and fire protection in this District.

The force mains from the Low Service Station, West Roxbury, to the junction of Boylston Street and Fisher Avenue have been cleared from mineral encrustation. The work was done under contract with the National Water Main Cleaning Co., this Department furnishing labor necessary for excavating, cutting and replacing the mains. Very satisfactory results were obtained and the carrying capacity of the mains has been increased by at least thirty per cent and the head against the pumps decreased from twenty-five to thirty feet. As the capacity of the mains has been so materially increased we expect to take from our source of supply the full amount of water authorized by the Legislature and correspondingly reduce the amount to be taken from the Metropolitan District and the charge therefor. It may be necessary to drive a limited number of wells to secure this additional supply but this can be done at a comparatively small expense.

The low service station at West Roxbury has been thoroughly repaired and the outside woodwork, together with the interior finish, painted. A new electric generator has been installed at this station replacing the old machine which had been in constant use since 1904. The entire plant can now be satisfactorily lighted with electricity generated by our own equipment which was impossible with the former generator.

An accident occurred to one of the turbine pumping engines at the Low Service Station which necessitated immediate repairs, costing approximately $3,000.00. This expenditure was wholly unforseen and as the appropriation for such repairs was unsufficient, authority was requested of, and granted by the Board of Selectmen to charge the cost of the said repairs to any unexpended balances in the amounts appropriated for general maintenance.

The same high efficiency has been maintained at the filter plant as in previous years. No chemicals are used in the process of filtration and the final effluent is clear, cool and wholesome.

In conformity with the general plan of economy, the appropriations recommended for the ensuing year have been reduced to a minimum. The amount recommended for maintenance includes an item of $9,000.00 for lowering and relaying water mains at the junction of South Street and Ledyard Road, and at certain intersections of the force mains in West Roxbury, which will be necessary on account of the construction of the Metropolitan Parkway through this District by the

State. The Board is of the opinion that the State should reimburse the Town for this work.

The following appropriations are recommended for the coming year:

For general maintenance	$194,117 00
For general extension	31,300 00

FINANCIAL STATEMENT

EXTENSION ACCOUNT FOR YEAR ENDING DECEMBER 31, 1931

Receipts

Appropriations	$67,350 00

Disbursements

For street mains	$36,998 43	
For service pipe and connections	16,188 24	
For meters and connections	2,073 56	
For unexpended balance	12,089 77	
Total		$67,350 00

MAINTENANCE ACCOUNT FOR YEAR ENDING DECEMBER 31, 1931

Receipts

Appropriations	$201,385 00

Disbursements

For buildings	$2,959 37
For driven wells	2,571 65
For filter	12,114 10
For fountains	55 46
For grounds	1,116 43
For holidays	10,438 78
For hydrants and renewals	11,880 45
For injured men	1,789 00
For meters	5,752 40
For meters (reading)	2,188 15
For office expenses	5,076 81
For pensions	2,613 55
For pumping expenses, low service	49,870 00
For pumping expenses, high service	10,782 23
For reforesting water works land	1,800 00
For re-surfacing streets	1,358 94
For reservoirs	174 73
For salary of Water Board	2,250 00
For salary of Water Registrar	3,400 00
For salary of Superintendent	4,000 00
For salary of Assistant Superintendent	2,608 33
For service pipe	4,141 27
For sickness and funerals	2,578 37
For snow	264 35
For standpipes	95 22
For street mains	1,685 07
For taxes	421 98
For telephones	330 84

For turning off and on	2,841 69	
For vacations	3,265 21	
For workshop and garage	8,375 75	
For new service building	2,631 55	
For new chimney	5,554 39	
For cleaning force mains	7,835 72	
For all other expenses	884 84	
For unexpended balance	25,678 37	
Total		$201,385 00

REVENUE

Received from private consumer meter rates		$288,915 44
Charges to Town of Brookline:		
For Almshouse	$166 50	
American Legion	19 44	
Bathhouse	2,418 02	
Cemeteries	39 58	
Devotion House	17 64	
Fire Department Houses	543 76	
Forestry Department	4 68	
Fountains	791 94	
Incinerator	29 28	
Garage, Boylston Street	138 88	
Municipal Gymnasium	956 40	
Park Department	1,193 32	
Police Department	116 82	
Public Library	58 68	
Recreation Centers	112 50	
Sanitary, Village Square	475 30	
School Buildings	5,611 80	
Street Department	47 34	
Town Hall	139 74	
Town Hospitals	682 76	
Water Department	150 48	
Water Department, Pumping Stations	981 90	
Miscellaneous:		
Flushing sewers, water mains, fires, etc.	6,600 00	$21,296 76
Total		$310,212 20
Received for extension of service pipe, labor and materials		$ 4,198 31
Received for hydrant service, labor and materials, etc.		$ 778 84

TIMOTHY J. BURKE, *Chairman,*
GEORGE H. FRANCIS, M.D.,
FRANCIS W. HAMILTON,

Water Board.

SUPERINTENDENT'S REPORT

Brookline, Mass., December 31, 1931.

To the Brookline Water Board:

Gentlemen:—I respectfully submit the fifty-sixth annual report of the Superintendent of the Water Works for the year ending December 31, 1931.

The work in brief of the Water Department for the past year is as follows:

The works have been maintained in the usual way and no leaks have occurred in the force mains. Eight leaks occurred in the street mains and forty in the service pipes. The leaks in the street mains were from causes beyond our control, such as new construction work and settlement of sub-soil, and the same is generally true in respect to the service pipes.

Fourteen hydrants were broken, of which twelve were by automobiles, one by a contractor's digging machine and one by operation. The cost of this work was assumed by the party causing the damage whenever the identity was known.

Ninety-nine new services, a fewer number than previous years, because of less building, were laid.

Nearly two miles of street mains were laid as shown in the appended tables.

Two new six-inch fire supplies to buildings were laid.

Four playgrounds were connected to our mains for winter flooding.

Approximately ten miles of force mains were cleaned from the Low Service Pumping Station to Fisher Avenue. This produced very satisfactory results as evidenced by the decrease of nearly 30 feet of the pumping head at the station.

Seventy-one gates were cut in on the older hydrants and this work is appreciated when a hydrant is broken.

Twenty-eight gates have been placed on street mains.

Eighty-two service pipes have been relaid in the streets, including all of the older service pipes in Aspinwall Avenue where a permanent pavement was laid, also Fairmount Street where a new 8″ high service main was laid, and Newton Street from Clyde to South Street where a new roadway was constructed.

Another emergency connection was made with the Boston Water Works system to our 8″ high service line in Russett Road, near the Town line, thus making four such connections in the southerly part of the Town. There are three 8″ and one 12″ connections.

Alterations of lines and grades of Newton Street, between Clyde and South Streets, made it necessary to relay nearly 450 feet of the 12″ high service mains near the Country Club and also encase the 16 and 20″ force mains in concrete for protection against traffic and frost. Changes in location of hydrants and service pipes were also necessary.

The annual consumption of water shows a decrease of 1/3% over last year's rate. This may be attributed to the six inch excess rainfall up to June 20, and also to the larger number of vacant apartment units.

The spare trickler, built during the war and not filled with coke, was put in operation last Spring, after having been filled with a very satisfactory grade of coke from the New England Coke Company. Next year it will be necessary to re-coke several of the tricklers. These have been in constant use since 1915 and are now clogging to a degree where flushing has but little effect. Their efficiency is in no way impaired but the flow of water through them is very much retarded. The old coke, which is to be removed, may be reclaimed and used with our fuel supply.

The oak trees in the rear of the Low Service Pumping Station have caused considerable difficulty in keeping the open filters clear of the leaves which settle on the bottom. It is considered advisable to remove the larger number of these trees and replant with pine trees.

The engines, pumping machinery and boilers at both pumping stations are in good repair. In the Fall it was necessary to replace the gears in one of the steam turbines, at the Low Service Station, which had broken without damaging the other parts. An extra gear was made at the same time to be used for future replacement.

A special policeman was engaged during the summer months to protect our grounds at the Charles River from depredations and nuisances by swimmers.

Hydrants, reservoirs and other departmental property have had the usual care. Additional work around the pine trees on the watershed in Dedham has been done by the Brookline Forestry Department.

Two new Ford trucks were bought to replace the two which were worn out, and the touring car was made into a small truck for meter work.

All work performed during the year, except by department employees, was performed under contracts obtained by competition and preference given by the contractors to residents of the Town.

Several of the driven wells are gradually losing their output, especially during periods of low water in the Charles River. It will be necessary the coming year, to pump them out as has been done in the past and drive some additional wells.

On December 8, the Commonwealth, for its Department of Public Works, made a taking of land in Brookline and West Roxbury, for a new boulevard, construction of which was started on December 10.

This will necessitate the relaying of our street mains, service pipes and hydrants in Ledyard Road and South Street, also both of our force mains in West Roxbury, near Baker Street.

A petition, by the Town Attorney, to cover the cost of these changes will be filed with the Superior Courts of Suffolk and Norfolk Counties. The cost of this work is estimated to be $9,000.00.

Details of water consumption, mains, and services laid and other data may be found in the sub-joined tables.

Respectfully submitted,

FAYETTE F. FORBES,

Superintendent of Water Works.

Extensions to Street Mains, 1931

Extensions to Low Service:

Churchill Street	330 feet	8-inch pipe
Chilton Street	472.4 feet	8-inch pipe
Total Low Service laid, 1931	802.4 feet	

Extensions to High Service:

Jordan Road	23.0 feet	6-inch pipe
Grove Street	1,295.0 feet	8-inch pipe
Cramond Road	976.5 feet	8-inch pipe
Lapland Street	456.0 feet	10-inch pipe
West Roxbury Parkway	726.5 feet	6-inch pipe
Woodland Road	1,513.0 feet	10-inch pipe
Fairmount Street and Park Reservoir	1,838.0 feet	8-inch pipe
Total High Service laid, 1931	6,828.0 feet	
	802.4	
Total laid during 1931	7,630.4 feet	

Service Pipes

Number laid as per last report	7,677
Number removed the past year	34
Number of old services	7,643
Laid during the past year	99
Total service pipe in use	7,742

List of Stop Gates in 1931

Twelve-inch Gates:
One on Newton Street corner Clyde Street.
One on Newton Street near Almshouse steps.
One on Lee Street at Reservoir Park (Dudley Street).

Ten-inch Gates:
One on Woodland Road at Hammond Street.
One on Lapland Street at Heath Street.
One on Beacon Street at St. Marys Street (North side).
One on Beacon Street at St. Marys Street (South side).
One on Naples Road at Gibbs Street.

Eight-inch Gates:
One on Grove Street at Bellingham Road.
One on Grove Street east of Allendale Road.
One on Churchill Street at Carlton Street.
One on Chilton Street at Ivy Street.
One on Churchill Street at Chilton Street.
One on Abbotsford Road at Thorndike Street.
One on Garrison Road at Rawson Road.
One on Reservoir Park (Dudley Street) at Lee Street.
One on Fairmount Street at Dudley Street.
One on Fairmount Street near number 81.
One on Russett Road at Town Line.

Six-inch Gates:
One on Aspinwall Ave. near St. Paul Street.
One on Hamilton Road corner Fuller Street.
One on Newton Street opposite number 640.
One on Stedman Street at Beals Street.
One on Englewood Avenue near Beacon Street.
One on West Roxbury Parkway, opposite number 925.
One on West Roxbury Parkway, near number 879, west side.

Drinking Fountains

Total to date	19

List of Hydrants

Number as per last report connected with Low Service	615
Number as per last report connected with High Service	332
Total number of hydrants at end of 1931	947

The following hydrants have been set in 1931 —
(A) Hydrants set and connected with Low Service:
One on Chilton Street at Churchill Street.
One on Chilton Street at Ivy Street.
One on Churchill Street at Carlton Street.
One on Washington Street at Beacon Street (North).
One on Englewood Avenue at Beacon Street.
One on Winthrop Road opposite number 199.
One on Powell Street near Beacon Street.
One on Fairbanks Street opposite number 17.

Total supplied by Low Service	8

(B) Hydrants set and connected with High Service:
One on Grove Street opposite number 96.
One on Bellingham Road at Grove Street.
One on Newton Street near number 209.
One on Newton Street west of number 209.
One on Newton Street near Almshouse steps.
One on Newton Street, 2nd from High Service Station.
One on Newton Street, 3rd from High Service Station.
One on W. Roxbury Parkway between numbers 875 and 925.
One on W. Roxbury Parkway near number 871.
One on Reservoir Parkway near Lee Street.
One on Fairmount Street near number 81.
One on Fairmount Street near number 39.
One on Fairmount Street near number 21.
One on Colbourne Crescent near number 105.
One on Garrison Road opposite number 39.
One on Lapland Street near Cramond Road.
Two on Cramond Road.
Four on Woodland Road.

Total supplied by High Service	22
Total hydrants to date	977

1931

Lengths and Sizes of Mains

	24-inch	20-inch	16-inch	14-inch	12-inch	10-inch	8-inch	6-inch	2-inch
(1) All mains supplied by Low Service:									
Old force mains from engine house to standpipe	.....	.....	2,900	9,070	.....	.....	.....	.....	.....
Old force main from standpipe to reservoir	.....	.....	13,456	.....	.....	.....	.....	.....	.....
New force main from engine house to reservoir	.....	25,199	.....	.....	.....	.....	.....	.....	.....
Suction pipe from driven wells to engine house	2,054	2,093	531	.....	.....	1,627	155	.....	.....
Street mains as per last report of 1930	7,953	.....	1,586	3,950	27,108	37,775	58,625	191,317	9,504
Street mains laid during 1931	.....	.....	.....	.....	.....	.....	802	.....	.....
Total supplied by Low Service	10,007	27,292	18,473	13,020	27,108	39,402	59,582	191,317	9,504

Total of mains on Low Service, 74.944 miles.

(2) All mains supplied by High Service:									
Force main from engine house to standpipe	.....	.....	.....	.....	9,925	.....	.....	.....	.....
Street mains as per last report of 1930	.....	.....	1,584	.....	26,952	43,867	40,691	84,028	2,075
Street mains laid during 1931	.....	.....	.....	.....	.....	2,490	3,589	749	.....
						Aban	doned		1,415
Total supplied by High Service	.....	.....	1,584	.....	36,877	46,357	44,280	84,777	660

Total of mains on High Service, 40.775 miles.

Total of mains on High and Low Service, 115.719 miles.

1931

Record of Consumption

	Pumped by Brookline	Supplied by Metropolitan	Total Consumption	Average Daily Consumption	LOW SERVICE		HIGH SERVICE	
					Monthly Consumption	Daily Consumption	Monthly Consumption	Daily Consumption
Jan.	141,484,217	3,618,000	145,102,217	4,680,717	117,965,159	3,805,328	27,137,058	875,389
Feb.	129,992,387	1,183,000	131,175,387	4,684,835	107,108,382	3,825,301	24,067,005	859,534
Mar.	145,275,319	1,249,000	146,524,319	4,726,591	119,736,477	3,862,467	26,787,842	864,124
Apr.	140,956,095	3,193,000	144,149,095	4,804,969	116,260,691	3,875,356	27,888,404	929,613
May	146,734,616	5,827,000	152,561,616	4,921,343	120,805,622	3,896,956	31,755,994	1,024,387
June	140,620,396	1,279,000	141,899,396	4,729,979	112,324,391	3,744,146	29,575,005	985,833
July	137,848,886	1,250,000	139,098,886	4,487,061	105,662,333	3,408,463	33,436,553	1,078,598
Aug.	131,262,831	12,474,000	143,736,831	4,636,672	112,634,164	3,633,360	31,102,667	1,003,312
Sept.	126,596,889	6,460,000	133,056,889	4,435,229	104,734,686	3,491,156	28,322,203	944,073
Oct.	125,319,614	21,130,000	146,449,614	4,724,020	114,985,497	3,709,049	31,464,117	1,014,971
Nov.	124,508,034	9,606,000	134,114,034	4,470,467	106,533,599	3,551,119	27,580,435	919,348
Dec.	131,937,680	6,283,000	138,220,680	4,458,732	109,948,075	3,546,712	28,272,605	912,019
Totals	1,622,536,964	13,552,000	1,696,088,964	4,646,819	1,348,699,076	3,694,792	347,389,888	951,753

COMPARATIVE RECORD

	Gallons Consumed	Revenue
1887	278,359,709	$23,255 75
1888	310,405,325	21,536 86
1889	279,359,709	26,383 10
1890	320,070,873	31,592 60
1891	357,230,592	34,870 32
1892	382,956,753	37,026 61
1893	442,278,871	38,109 68
1894	479,685,974	49,121 02
1895	480,893,420	53,134 73
1896	494,138,903	53,557 38
1897	503,854,810	56,691 38
1898	537,266,873	62,811 81
1899	646,836,370	71,308 14
1900	708,362,502	74,769 81
1901	694,230,538	74,819 88
1902	715,814,359	78,684 61
1903	772,069,955	83,114 91
1904	859,579,407	83,632 07
1905	812,737,855	81,811 65
1906	747,584,509	74,062 22
1907	816,428,519	84,863 43
1908	861,113,573	90,605 46
1909	844,709,560	78,207 56
1910	903,840,645	97,891 25
1911	951,259,556	104,191 79
1912	963,682,490	104,406 52
1913	988,623,658	108,377 31
1914	1,049,528,593	112,323 73
1915	1,003,910,228	116,511 04
1916	1,038,746,458	118,540 67
1917	1,123,646,921	133,441 50
1918	1,147,421,373	130,127 47
1919	1,207,816,983	133,986 41
1920	1,263,040,754	146,886 17
1921	1,284,539,641	148,470 71
1922	1,308,440,099	152,223 73
1923	1,389,154,626	161,283 41
1924	1,452,780,177	161,997 03
1925	1,485,069,830	249,617 92
1926	1,535,553,464	259,927 13
1927	1,547,252,585	267,918 14
1928	1,608,245,572	278,797 03
1929	1,645,528,370	304,554 43
1930	1,714,642,517	300,078 26
1931	1,696,088,964	288,915 44

LOW SERVICE ENGINEER'S REPORT

Low Service Station,
West Roxbury, Mass.
December 31, 1931.

To the Brookline Water Board:

Gentlemen:—I have the honor to present the fifty-fifth annual report of the Engineer for the year ending December 31, 1931.

The amount of water pumped during the year 1931 was 1,622,536,964 gallons; 23,067,269 gallons more than last year and the consumption of coal for all purposes was 5,035,600 pounds, 37,530 pounds more than last year.

The rainfall was 46.32 inches; 12.29 inches more than last year. The maximum precipitation was 9.08 inches in June, and the minimum 0.76 inches in November.

Boilers

The Boilers are in good condition and have been regularly inspected by the Hartford Steam Boiler and Inspection Company.

Turbines

All the Turbines are in good working order.

Engines

The Engines are in good condition.

I subjoin tables showing the pumping records, all of which is respectfully submitted.

RICHARD J. FLINN,
Engineer.

Low Service Pumping Station Brookline Water Works, West Roxbury, Massachusetts

RECORD OF PUMPING ENGINES NOS. 3 AND 4 FOR YEAR ENDING DECEMBER 31, 1931

Months 1931	Days	Pumping Time				Revolutions	Gallons Pumped	Head in Feet	Total Coal	Gallons Pumped Per Pound Total Coal	Station Duty per 100 lbs. Total Coal
		Total		Average							
		Hrs.	Mins.	Hrs.	Mins.						
January	31	715	45	23	50	1,144,141	136,152,779	204	438,500	310	52,700,000
February	28	668	35	23	53	1,087,081	129,362,639	210	405,000	319	55,825,000
March	31	744	00	24	00	1,220,801	145,275,319	211	426,500	341	59,959,166
April	30	720	00	24	00	1,184,505	140,956,095	211	402,000	351	61,717,500
May	29	669	50	23	06	1,110,915	132,198,885	211	381,500	346	60,838,333
June	30	720	00	24	00	1,181,684	140,620,396	211	405,000	342	60,135,000
July	31	740	45	23	37	1,153,223	137,223,537	206	416,800	329	56,478,333
August	31	716	45	23	07	1,058,718	125,987,442	200	422,500	298	49.666,666
September	30	711	45	23	44	1,063,831	126,595,889	201	433,000	292	48,910,000
October	17	381	05	22	25	576,449	68,597,431	183	26,500	259	39,497,500
November	30	717	20	23	55	1,041,996	123,997,524	169	507,600	244	34,363,333
December	31	744	00	24	00	1,108,720	131,937,680	173	453,200	291	41,952,500
Totals and Averages	349	8,245	29	23	23	12,932,064	1,538,166,616	199	4,718,100	326	54,061,666
Engine, No. 3	28	498	10	17	48	702,692	83,620,348	194	317,500	267	43,331,666
Totals, both	..	8,743	..	..	..	13,364,756	1,622,536,964	...	5,035,600	...	.....

HIGH SERVICE ENGINEER'S REPORT

High Service Pumping Station,
Brookline, Mass.
December 31, 1931.

To the Brookline Water Board:

I have the honor to present the annual report of the Engineer, for the year ending December 31, 1931.

The amount of water pumped during the year 1931 was 347,389,888 gallons; 33,696,278 gallons less than last year.

The No. 2 Engine has done practically all of the work. The steam end of the Turbine has been overhauled and new carbon rings installed, also new main bearings.

The boilers are in good condition with the exception of a good deal of scale which we are endeavoring to remove with a new boiler compound.

I subjoin tables showing the pumping records.

Respectfully submitted,

LEWIS A. GOLDSMITH,
Engineer.

High Service Pumping Station

RECORD OF ENGINE NO. 2 AND TURBINE FOR YEAR ENDING DECEMBER 31, 1931

Month 1931	Separate Days Pumping	Hours and Minutes Worked		Average Pumping Time		Total Gallons Pumped	Total Head Against Pump	Coal Consumed for Pumping, Heating Hospital and Almshouse
		Hrs.	Mins.	Hrs.	Mins.			
January	31	326	00	10	31	27,137,058	124	191,705
February	28	293	20	10	29	24,067,005	125	160,794
March	31	308	45	9	57	26,787,842	125	195,760
April	30	296	05	9	28	27,888,404	126	185,782
May	31	325	20	10	30	31,755,994	124	130,113
June	30	202	20	20	05	29,575,005	122	94,360
July	31	348	40	11	15	33,436,553	121	80,210
August	31	340	00	11	00	31,102,667	121	83,785
September	30	294	00	9	48	28,322,203	117	109,430
October	31	348	25	11	15	31,464,117	127	161,236
November	30	290	20	9	40	27,589,435	124	165,033
December	31	296	45	9	34	28,272,605	125	187,018
Total	365	3,670	00	121	32	347,389,888	....	1,745,226