Salt Lake City Council Minutes December 12, 1904.

Resolution No. 210 . By Councilman Bernstrom.

WHEREAS, the Committee of Citizens, appointed by the Mayor, in conjunction with the Special Committee on Water Supply of this Council, have formulated an address to the tax payers of this city for their consideration, prior to the Special election to be held on January 3rd, prox, therefore, be it

RESOLVED, that the said address to the taxpayers be made a part of this resolution and adopted by this Council as the plan for the proposed water increases; and be it further,

RESOLVED, that the Mayor be authorized to have said address, together with this resolution, published in the press of this city and that the Mayor be further authorized to have the said address and resolution printed in pamphlet form and a copy thereof be placed in every home and business house in this City, at a cost of not to exceed $500.00.

TO THE PROPERTY TAXPAYERS OF SALT LAKE CITY:

The City Council having ordered a special election to be held January 3, 1905, for the purpose of submitting to the qualified voters, the proposition of the issuance of $1,000,000 four per cent bonds, with which to obtain money to secure a permanent and adequate water supply, and to make necessary sewer extensions, it is deemed advisable that this address be given the widest possible publicity among the people to be affected. The advantages that will accrue to Salt Lake City and County by favorable action upon the momentous question involved, are so manifold and so manifest, and the objections so far and so groundless, that there can be no doubt as to the outcome of the issue when the taxpayers shall have passed upon the same at the polls.

The success of the plan means a Great Salt Lake; a larger and richer city- the permanent solution of a problem that has impeded the groth (sic) and progress of our city for many years; one that now threatens to halt its expansion altogether unless it shall be satisfactorily disposed of. The means of solution are finally at hand. It remains only for the taxpayers to ratify them. That done, the future of Salt Lake City will be assured. Naturally, every citizen will want to know just what is proposed, what the city's abilities are, and what the cost will be. On all of these points he will be given only accurate information based upon official records and obtained from the most conservative sources.

Under the law the city has the right to borrow money for water, artificial light and sewer improvements, the sum of $1,250,000.00 The proposition that the city council has ordered to be voted upon, is for the issuance of $1,000,000.00, in bonds, of which sum- $850,000.00 is to be utilized in securing a permanent water supply several times the volume of what we now have, and $150,000 for sewering the southern and western part of the city, an improvement that would be worse than usual unless more water is secured to make it effectual.

By way of information the taxpayer will probably ask specifically how the interest

is to be raised on this issue of bonds, and whether it means an increase in taxation. The answer will doubtless be more pleasing than he imagined. ‘It may be stated first of all, that no increase of taxation is contemplated. An examination of the records of the waterworks department, covering a long period of years, proves conclusively that the revenues in that branch of the municipality alone are more than ample to pay the annual interest of the proposed water bond issue. Besides, these revenues are constantly increasing at a rate exceeding five per cent each year; and that too, in the face of an inadequate water supply and retarded growth in population. The figures which follow, entirely justify the conclusion that with a numerical augmentation of people, an increase in wealth and property improvements, and consequently a greater tax-paying capacity, that there will be a still greater revenue from this department.

For several years past there has been suplied (sic) a sum averaging a sum averaging over $55,000 annually for water services betterments, redemption of scrip, increasing of waterworks stores and reserve fund, every cent of which has been derived from the department itself, which, at the same-ratio, after paying the $34,000 interest on the proposed bonds, will leave a margin of $21,000. The water revenues beginning with the year 1900, are as follows:

1900,	$ 87,808.65
1901,	102,810.92
1902,	103,262.72
1903,	112,883.79

And the records of 1904 disclose the interesting fact that there will be a proportionate increase in the same department this year. Surely, such a showing as this should inspire the taxpayers with full confidence in the ability of the waterworks system of the city to support itself, including the payment of the interest on the proposed bond issue, and leave a handsome annual margin in addition, that must grow larger with the years, and which should be supplied to the redemption of the bonds themselves.

Another important fact to remember is that, at the very outset of the annual drain that has been made upon the waterworks fund for betterments will cease. This highly desirable condition will be made possible by the provision that requires a prompt expenditure of $100,000 to make all necessary improvements heretofore undertaken and carried out in piece-meal fashion.

CITY WATER SUPPLY.

Providing water for a city that is situated in the very heart of this rainless region is a work fraught with difficulties unknown to other places. Many problems must be solved for which there is no predecent (sic) for a guide. Originality, therefore, becomes a necessity in dealing with many matters that are inseperable from the question of providing an increase in the water supply of this city. Due allowance should be made for this by the taxpayers who are called upon to decide this important question, a question which involves the growth and greatness of the city,

The present water supply of this city is derived from four separate sources. These sources and the quantity of water that each supplies daily, during the season of minimum flow, are as follows:

City Creek,	4,802,134 gallons.
Emigration creek,	1,000,000 gallons.
Parleys Creek,	4,202,740 gallons.
Utah Lake Reservoir,	43,580,000 gallons.
Total daily supply,	53,564,874 gallons.

Of this total daily quantity only the creek water, (10,004,874 gallons) is suitable for drinking. The remainder, (42,580,000 gallons) which comes from the Utah Lake Reservoir, is suitable only for irrigation and kindred uses. The creek water comes into the city from the mountains through three separate and substantial conduits.

The distribution system comprises four districts or zones, known as the lower, the upper, the Thirteenth Street and the Capitol Hill districts, respectively. The lower and the upper districts are each supplied with the commingled waters of Parley's, Emigration and City Creeks. The 13th Street and the Capitol Hill districts, are both supplies from City Creek exclusively.

The Utah Lake Reservoir water is brought into the city through an open channel known as the Jordan and Salt Lake City Canal. The water from this source is used for irrigation partly by the farmers in exchange for Parley's Creek and partly through the system of irrigation ditches which ramify the City.

All the creek water comes from the canyons and is distributed by gravity, thus insuring the least cost for carriage and distribution.

The reservoir water originally ran out of the Lake into Jordan River and through the canal to the city by gravity, but, during the last three seasons it has been necessary to pump the water from the lake into the river channel on account of the water in the reservoir having receded to a point below the level of the river outlet.

So far as quantity is concerned, the City's present water supply is sufficient for many years to come. The greater portion of the water, however, is not of the quality required for general use and the need is therefore of more water of the required quality.

On account of the dryness of the climate and the consequent need for a liberal use of water in lawn and street sprinkling, it has been estimated that a daily supply of 300 gallons per capita is not an excessive requirement and should be made the basis for determining the city's needs.

On this basis it is clear that the city's present supply of potable water, (10,004,874

galons (sic)), is only about half enough to properly supply the present population. Such a condition points out, more plainly than words can possibly do, the need for early and united effort to supply this deficiency and at the same time provide in a reasonable degree for the future growth and needs of the city.

In considering any plan for relief from the conditions that confront us, the taxpayers should keep in mind the facts that, wherever we go the water supply has already been appropriated by others and cannot be taken by the city without just compensation; that the sum of money which it is prepared to spend for increasing the water supply is only $850,000, and that . . . by which this sum can be materially increased.

If this water is purchased the price of the water must include the value of the land, and all appurtenances, upon which the water is now being used. To take the water from the land implies its degradation and the practical destruction of all improvements that are upon it.

In case of condemnation the obligation to provide the price of water taken, would not be removed nor could the loss of time and increased cost due to such procedure be avoided.

In addition to the price of water that might be procured through either purchase or condemnation there must be provided a sum sufficient for the construction of a conduit in which to carry the acquired water from its source into the city, and it is impossible to accomplish both the purchase and the carriage of the needed water with the sum of $850,000.

Coming into the valley from the nearby mountains on the East are the several streams known as Mill Creek, Big Cottonwood and Little Cottonwood, respectively. The water from each of these streams is of well known purity and is so situated that it can be brought into the city by gravity through works which will cost infinitely less than needed to bring in an equivalent supply from any other possible source. But the water from these streams has already been appropriated and is used by a large number of individuals to irrigate a considerable area of high-priced land that lies adjacent to the city. This water must therefore be acquired before its use by the city can be made possible.

From careful and repeated measurements it has been ascertained that the daily supply of water which these sources afford, in seasons lowest flow, is as follows:

Mill Creek,	6,631,211 gallons.
Big Cottonwood,	17,883,588 gallons.
Little Cottonwood,	7,827,867 gallons.
Total Daily Supply,	32,342,666 gallons

It is proposed to acquire the water from these sources and so make available for city use during times of lowest flow, the following daily supply of potable water:

Present supply,	10,004,874 gallons.
Increased supply,	32,342,366 gallons.
Total Daily Supply,	42,347,540 gallons.

At the estimated rate of 300 gallons daily per capita this would provide amply for the needs of at least double our present population, and so relieve the present unfortunate condition as well as provide in a reasonable measure for the future. That it is practicable for the city to acquire this additional quantity of potable water and construct a conduit for bringing it into the city at cost, in money, not to exceed the $850,000, available for water supply purposes, is shown by the following statement of facts:

Two thirds of the land upon which this water is now used lies below the city's canal, and there are no physical difficulties in the way of irrigating these lands with water from the canal. The owners of this land have expressed a willingness to use water from the canal in lieu of their present supply from the mountains, and the city has taken options for the exchange, in this manner, of one-half the water of Big Cottonwood Creek. Negotiations are pending by which it is expected that practically all the waters of Big Cottonwood and Will Creek will be acquired by exchange and lease, as well as the waters of Little Cottonwood, as soon as the necessities of the city shall require.

The terms of exchange are practically the same as those relating to Parley's Creek, except that, in this instance, the city is to pay a bonus of ten dollars per acre to the farmers, and give them, during the irrigation season, an additional quantity of twenty-five percent., more canal water than it receives of mountain water. These are the best terms that can be made now, and they do not seem unjust when the difference in value between the mountain waters and the waters from Utah Lake is considered.

It is proposed to acquire such portions of the waters of these mountain streams as are used on lands above the City canal by lease, for a long term of years, and assurances have been given that such leases can be obtained at a very low rental.

It is proposed in the options, to "grant, bargain and sell" to the City all of the farmer's rights to the perpetual use of the mountain water, unless default is made by the city in furnishing them the exchange water, and, in that event, they reserve the right to use the mountain water only during the time that the default continues, but there can be no forfeiture of the contract, unless the failure of the city to furnish the exchange water continues for a period of six months, and than it is optional with the farmers whether the contract shall be terminated or not. While an absolute and unconditional exchange of the waters of the mountain streams for the lake water would be more desirable, still, the City runs no risk of forfeiting the right to use the mountain water, because, by carrying out the contemplated plan and making the available supply of water at Utah Lake absolutely certain, it would render any forfeiture or even default or interruption in the use of the water practically impossible. The essence of the proposed exchange agreement lies in the City's ability to furnish a sufficient and certain substitute for the mountain

water.

The quantity of water that will be ultimately required, daily, for the exchange of mountain water will, under the plan proposed, be as follows, for a period of 180 days:

For Parleys Creek,	4,202,740 gallons.
For Mill Creek,	6,631,211 gallons.
For Big Cottonwood,	17,883.588 gallons.
For Little Cottonwood,	7,827,867 gallons.
For the 25% bonus,	8,085,666 gallons.
Total daily requirement for 180 days, or daring exchange period,	44,631,072

At the lowest known stage of water which occurred last year there was, at the end of the irrigation season, in the Utah Lake Reservoir, 143,748,000,000 gallons of unused water. One-fifth of this quantity, or 28,749,600,000 gallons, the City's share of this stored water, is the equivalent of a daily flow of 152,720,000 gallons for a period of 180 days. This, with the quantity which the city drew from this source the same season, would make the City's total daily supply from the lake, in seasons of lowest flow, for a period of 180 days, as follows:

Daily available flow,	43,580,000 gallons.
Daily unused flow,	159,720,000 gallons.
Total possible daily flow,	203,280,000 gallons.

or four and one-half times the ultimate daily requirement for exchange according to the proposed plan.

There is no doubt that all the water necessary for exchange purposes can be made available from Utah Lake Reservoir through the installation of additional pumps, or the ratification of the river channel, and that its certain delivery to the farmers, can be effected by a reasonable expenditure for repairs on the City Canal.

In addition to the prospective rights, the City has taken an option on Spring Creek, which can be exercised if it shall be thought prudent to do so. But the Spring Creek proposition is not included in any of the recommendations or estimates of this address.

There is nothing experimental in the plan of procuring a supply of potable water for an equivalent of irrigation water. The city has had the use of Parley's Creek water for the past fifteen years, under a similar plan and during that time there has not been to exceed two days of interrupted flow- no longer than it is necessary to shut off the water from some street main to effect a needed repair.

The work by which it is proposed to consummate the plan and the cost of such work, as estimated by the City Engineer, are as follows:

Conduit from Cottonwood to Parleys,	$250,000.00
Power Plant at north of Parley's,	40,000.00
Development at Utah Lake,	200,000.00
Repairs on City Canal,	20,000.00
Improvements of distributing system,	100,000.00
Money consideration in exchange of water,	50,000.00
Extinguishment of power rights and incidentals,	50,000.00
Engineering preliminaries and supervision,	40,000.00
Total Estimated cost,	$850,000.00

The proposed conduit will be constructed of cement concrete and be of such dimensions as will carry the acquired water. It will discharge the Will Creek and Cottonwood waters into Parley's Creek at an elevation of 130 feet above the intake of the Parley's Canyon Conduit, through which the water will be carried to the city. The 130 feet of fall between the discharge end of the proposed conduit and the intake of Parley's Canyon conduit will be utilized through the construction of the proposed power plant, in the production of power for pumping sewage from the proposed west side intercepting sewer up into the present gravity sewer.

The development work at Utah Lake will be of such character as will make certain and sufficient, for exchange and other purposes, the supply of water from that source. This work may be done in connection with that for which plans are now being prepared by the U.S. Reclamation Service, or independently as may be found most advantageous to the City.

The repairs on the City canal will consist of such work as will cut the channel in proper condition to deliver with certainty the water which will be developed at the Lake.

The improvements of the distribution system will comprise such enlargements and extensions in the present pipe system as will enable the proper distribution of the added water supply. The many considerations in effecting the proposed exchange of water will require the sum shown in the above statement.

The cost of extinguishing the several power rights situated below the point of proposed diversion of Big Cottonwood, and for miscellaneous incidentals it is estimated will require the amount placed in the schedule for these purposes.

The cost of the preliminary and supervising work for engineering has been estimated at five per cent, of the cost for the entire work, which it is thought will be ample.

The city is not in a condition financially to obtain an absolute title to the mountain water, because it is not able to purchase the water rights. If the City were bonded to the constitutional limit, it would not have sufficient money, after constructing the conduit and making provision for the distribution of water in the city, to purchase sufficient mountain water to materially increase the present supply. But, even if the City could raise the money to purchase

the water, inasmuch as it already owns a canal and valuable water rights from Jordan River and Utah Lake, would it not be a better business proposition to utalize (sic) that water, for which the City has no other use, in acquiring the mountain water, than to procure the same by purchase? There is no such thing known to th law as an absolute title to the water itself, but only to the use thereof, and, as the City will have the perpetual right to use the water, subject only to such conditions as it can control, there is but little difference in effect between the proposed arrangement and an absolute transfer to the City of the mountain water rights. It is believed that, when these plans are carried out and the development of Utah Lake and the establishement (sic) of permanent irrigation works for the distribution of the water are completed, farmers will see that their supply is just as secure and satisfactory from the Lake as from the mountains, and then a mutually satisfactory arrangement can be made by which the City will become the absolute owner of the mountain water rights.

All questions of a legal nature which related to the contracts for exchange or lease of the water, the increase of an available supply from the lake, or that may arise from any cause connected with the proposed work will be cared fro by the City Attorney and able associate counsel who can be depended upon to protect and safeguard the interests of the City.

The engineering work will be carefully designed and executed under the immediate directions of the City Engineer who will have the aid and advice of a competent consulting engineer.

The making of all contracts for construction and the approval of all bills, estimates and other matter requiring the payment of money and also the final acceptance of the work are matters which the law places in the hands of the Board of Public Works, whose actions must be approved by the City Council and Mayor.

These are assurances that the work will be properly designated and well constructed; that the money will be prudently expended and that the City's interest will be properly and fully protected.

In addition to the work above described, it is proposed to construct an intercepting sewer for the southern and western portions of the City where it is imperative from a sanitary view, than an effective system be provided for disposing of the sewage from that section. To accomplish this will, according to the estimates of the City Engineer, require the expenditure of $150,000 for which provision has been made in the proposed bond issue.

The advantages to be derived from a thorough and satisfactory solution of the water problem, the seriousness of which has been increasing each year, are so numerous and apparent as to require no particular citation. Benertheless, it may be briefly stated that these mean better health for the people, a lower death rate, more sprinkled streets, more threes (sic), lawns and flowers. In short, a more beautiful city with better facilities to extinguish fires, a reduction in fire insurance rates that will amount to many thousand of dollars annually and a restriction of water meters to the business and manufacturing districts. More than than, it means, too, that we will have more new business blocks; and more people will come here to invest their

capital and start industries that will give employment to many wage-earners, while those who are now residents will further improve their property. Manufacturing establishments are much needed in our city at the present time. There will be still greater necessity for them in the future. If we ever have them we must increase our water supply and in achieving that result it must be known that the increase is permanent, the source pure and the solution of problem certain. It is highly gratifying to this committee to be able to state to the entire people of Salt Lake that the solution is certain, the source pure and the increase permanent.

F. J. HEWLETT,
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GEO. D. DEAN,
RULON S. WELLS.

RICHARD P. MORRIS, Mayor.
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