

Birtkinbines'

Report of 1867  
of the

Capacity of Palmer's  
Water power for  
Supplying the Borough  
of Media with water

Also Report of Com-  
mittees appointed by  
Councils in  
1867 & 1871

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33<sup>15</sup>  
2  
66  
166  
82

The Borough Council of Media.

The undersigned appointed at the Meeting of Councils held on 7<sup>th</sup> June 1871, - a Committee to whom was referred the offer to the Borough of the Patner water power on Ridley Creek, -

Respectfully Report. -

That they find that the subject of a better supply of water to the Borough was in the latter part of the year 1866, presented upon Councils by many citizens of the Borough in a memorial earnestly setting forth the difficulties and inconveniences which then obtained. -

In pursuance of that memorial, Councils at their meeting of April 2<sup>o</sup> 1867 - March 6. 1867, - instructed the President to invite Wm. Birkenbine to visit Media for the purpose of Examining the Patner water power, - and that a report having been received from Mr. Birkenbine it was at the meeting of April 3<sup>o</sup> 1867, Referred to a Committee of Three with directions to make a Report upon the whole subject: - the Committee so appointed on the 12<sup>th</sup>: of April 1867 made a report which is hereto annexed, - as also the reports of Mr. Birkenbine; ~~on the same subject.~~

On the 6<sup>th</sup>: March 1867. - a Committee of Councils was appointed to procure legislation authorizing the necessary financial arrangements for the procurement of a more full and reliable supply of water, and in pursuance thereof

~~Health~~ Committee reported on the 6th of the following month that an act had been passed, which is to be found in the Pamphlet Laws of 1867, - page 1008.

The brief time allotted for action in this matter prevents a more minute investigation of the subject than is presented by the Reports made by Councils their Committees and the Engineer in 1867. - But it may be properly remarked, that at that time the offer of the water power was clogged with certain conditions, and as the terms and price were not definitely settled by either party, the reports were necessarily somewhat reserved upon the question of purchase.

Now, however, we have a fixed and definite price, <sup>and a renewed and urgent request from the citizens</sup> - and your Committee would suggest that upon the present Councils <sup>mainly</sup> rests the responsibility of saying whether, in view of the growing improvements of the Borough they shall ~~make~~ secure beyond all peradventure the full supply of household water afforded by the pure stream coming, at ~~the~~ <sup>the</sup> threshold of ~~the~~ Borough, or whether they will again leave this opportunity to the uncertainties of the future, not forgetting that by pursuing the latter course, the present development of the Borough may be seriously retarded, and the stream itself may ~~and~~ probably will be diverted to purposes, which will greatly interfere with its easy and favorable adaptation to Borough uses.

Under these considerations, your Committee would respectfully recommend the proposition of

Mr. Price - Trustee, to the favorable consideration  
of Councils, and the meeting of Citizens which it  
is contemplated to call, under the resolution  
of your body. —

All which is Respectfully Submitted

Samuel W. Thomas

John C. Beatty

Isaac W. Wrenn

June 12 / 1871

Media, May 20, 1891.

To the Council of the Borough of Media,  
Gentlemen,

Having purchased the Mill property on Ridley Creek late of Lewis Palmer, near the Borough of Media, containing about Fifteen acres, with the water rights, for \$19500=, and being desirous that the same shall be devoted to the use of the Borough, we hereby offer the property to you, at the cost to us, for the purpose of supplying the Borough with water, provided that this offer shall be considered withdrawn, if not accepted within thirty days from this date.

Edw A Price

Trustee to make sale, for

John M Bromall,

Francis J Alderman

J Laurence Alderman

& himself.



May 25<sup>th</sup> 1841

To the Council of the Borough of Medina  
Gentlemen:

The undersigned, Citizens of the Borough of Medina, and property owners therein, would respectfully call your attention to the better supply of pure water for the use of the Borough, and if ~~not~~ ~~compatible~~ compatible with public interests, would suggest the propriety of your calling at as early a period as possible, a meeting of the citizens, for the purpose of considering this important subject.

Edw. Garrison  
Gov. Coakley  
J. W. Hawley  
Joseph G. Cummings  
Fred. B. Buntant  
W. C. Brothead  
George H. Gore  
A. L. Washburn  
Franklin Walker  
Wesley G. Norrall  
Dan. McIntock  
J. Wade Price  
C. D. Mrs. Broomhall  
Charles Young  
Joseph Mulvaney  
L. M. Hooper  
Edward B. Childs

James W. Henderson  
James Sweeney  
Nardus Ellis

Dennis Leach  
Cherney Bittles

John S. Kitts

Isaac N. Flounders  
George H. Fish  
Wm. H. Peckham

Frank C. Raymond  
J. R. Lunt

E. H. Hall

Jacob Weaver  
Lewis Miller  
Caleb Briston  
Jas. R. Cummings  
J. M. Baker  
J. H. Mathies

Daniel Rice  
Christian Schur  
D. Averan  
Thos. V. Cooper  
W. Joseph Talley  
W. J. Jones  
W. Russell  
L. Mapey  
Samuel Fields  
Chas. D. Manley

John M. Hall  
Samuel Cutler  
Lewis Kirk

J. S. Garrall  
Wm. G. Fox  
J. M. Williamson  
W. H. Howard  
Joseph Parvint

Caleb Hoopes  
James W. Baker  
Evan C. Patterson  
Luke Ellis



W. W. Woodhead  
George H. Gore

A. L. Worswick

Pamela Walker  
Wesley G. Worrall  
Dana M. McIntock

Wade Price  
C. D. Mrs. Broomhall

Charles Young  
Joseph Mulvany  
L. M. Hooper  
Edward B. Under

James W. Henderson  
James Sweeney  
Wardell Ellis

Dennis Leach  
Cherney Bittel

John S. Kitts

Isaac N. Flinders  
George A. Fish  
Wm. H. Picotini  
Frank S. Raymond  
J. R. Leuler

E. H. Hall

W. Hall

James Yarns

George G. Hill  
J. H. Miller  
Geo. J. Stiteler

Sarah L. Miller  
Patrien. Coote  
Wm. Davenport

Nathaniel L. Davis  
Thomas R. Baldwin  
Daniel A. Meager

Levi Carr  
M. Packard  
E. Darlington

J. W. Mathies

Daniel Rice  
Christian Schur

D. Averan  
Thos. V. Cooper  
W. Cooper Talley

W. J. Jones  
W. Russell  
L. Maffey

Samuel Fields  
Chas. D. Manley

John M. Hall  
Samuel Cotton  
Lewis Kirk

J. S. Small

Geo. J. Full  
J. M. Williamson

W. H. Howard  
Joseph Parrish

James Derricks  
Caleb Hoopes

James W. Baker  
Craw E. Patterson  
Luke Ellis

Davis Lewis  
Robt. Mc Mullin  
Chas. D. Derricks

Oliver Bullard  
H. Howard  
J. H. Lewis

Wm. W. Dickeson

Sam W. Hallowell  
Joseph Carille

Charles Crinton  
David Morrow

George M. Lewis  
Geo. Atigby

Wm. Cowperthwaite  
Abram Smedley  
G. Darlington  
Jos. J. Hall

To the Hon. the Town Council of the  
Town of Media.

The undersigned citizens of  
Media respectfully set forth

That they are de-  
pendent on the Water Works of Media for that  
Supply of Water so necessary to health and con-  
venience, and for which you require compensation  
in advance: that many and repeated times  
within the year, they allow themselves to do  
without the fountain supply without complaint  
or murmur, but lately the want of a reason-  
able supply of water, so frequently occurs  
that they deem "patience no longer a virtue" and  
they therefore respectfully and earnestly en-  
treat you to consider they have claims on  
you for the fulfillment of your contract,  
and that you will employ such means as  
will relieve them of the great inconvenience  
under which they labor, and they will be

October 8. 1866

- Edw. A. Rice
- Fred. Fairbank (Court House)
- O. H. Bullard
- Erna. Lewis
- Maryant
- Clayton Smith
- James Sweeney
- Charly Young
- Eber Speakman
- W. B. Brodhead
- Benjamin C. Kirk
- William Richardson
- Benjamin Croother
- Samuel Turner
- Lewis Smith
- Josiah Silvey
- The Court

- Mrs. Abbott
- Lewis Miller
- Eli B. Gubb
- Harvey James
- J. L. Fullen

and that you will employ such means as  
will relieve them of the great inconvenience  
under which they labor, and they will be

October 8. 1866

Edw A Rice

Fred. Fairbank (Cont Same)

O. S. Bullard

Erra. Lewis

Maryant

Clayton Smith

James Sweeney

Chasly Young

Eber Speakman

John M. [unclear]

W. C. Brodhead

Benj. G. Kirk

William Richardson

Benjamin Crocker

Samuel Turner

Lewis [unclear]

Joshua Silvey

The [unclear]

Mrs. A. Hunt

Lewis Miller

Chas B. Gubb

Harvey James

J. G. Fullman

Geo. G. Fell

T. J. Waldeman

D. R. Hawking

Joseph T. Tuckerman

Mrs Anna Baker

Joseph Mulvany

William F. Thomas

Levi Carr

R. S. Howard

Thos. D. Melling

Isaac Haldiman Esq

Resident of the Town Council of Media;

Dear Sir.

In answer to the questions, submitted to me, having reference to your water supply, I would present the following.

The amount of water power produced by Redley Creek, at the mill, cannot be ~~ascertained~~ <sup>ascertained</sup> without measurements, made in different seasons and for a number of years.

My estimate of the power is formed upon data gleaned from those who had seen the mill, or had known the stream for a length of time, and also from calculations based upon the amount of moisture precipitated in rain and snow upon the country drained by the stream above the dam; allowance being made, <sup>for</sup> infiltration, absorption, ~~and~~ evaporation and waste of storm water, over the dam.

These estimates although not positively correct are sufficiently accurate for your present purposes.

The power of the stream with the fall (10 feet) is equal to 30 H.P. for the greater part of the year. In seasons of extreme drought, I have been informed, it is reduced to ~~five~~ <sup>four</sup> horse power. Such seasons occur only at long intervals and last but a few weeks

775040  
 1530080  
 387520  
 19376.00  
 38752

775040  
 2325120  
 387520  
 2712.640

11200  
 29534  
 1772.04  
 1600  
 400  
 100

One horse power will raise ten thousand gallons into your reservoir in twelve hours.

Thirty horse power will, therefore, raise six hundred thousand gallons per day.

Ten horse power working for twelve hours, will raise one hundred thousand gallons.

This may be considered as the minimum power of the stream, being one sixth of its ordinary power.

Your Respt.  
 Henry W. Dickinson

Philadelphia  
 May 11<sup>th</sup> 1867

600 /  
400  
300  
1300

Isaac Waldeman Esq.  
President of Town Council  
Media Pa.

Dear Sir:

Agreeably to your request I have examined your present water works, and the proposed alterations and would respectfully submit the following.

In the absence of absolute data, I have assumed that the run now supplying your town with water, furnishes - when working properly - 25,000 gallons per day. The amount necessary to give you an adequate supply for seasons of greatest demand is 50,000 gallons per day.

From information gleaned from those acquainted with the amount of water power at the Grist mill on Ridley Creek, I estimate that its minimum, is equivalent to raising 75,000 gallons per day into your reservoir.

This must be taken as the maximum ~~power~~ procurable from this source, for the greatest demands for an abundant supply of water is generally when the streams have the least flow. The following estimates are based upon supplying 75,000 gallons per day; with machinery and pumping mains of double that capacity - viz 150,000 gallons per day.

The relative value of the two sources of supply suggested - viz - The grist mill and

Ridley Creek; and the one now used) is shown by the following estimates.

First - Improving the present source  
By forming an impounding reservoir on the stream there would be no difficulty in procuring a supply of 150,000 gallons daily, which could be raised into the reservoir by steam power - In estimating for a supply of 75,000 this impounding reservoir would not be necessary

Steam engine and pump with connections complete	\$5,000.	
Engine house, foundations and stack.	3,000	
Six inch forcing main to reservoir - 1800 feet	3,500	
Incidentals and omissions	1,050	<u>\$11,550.00</u>

Expenses pumping 75,000 gals per day for 100 days

Engineer - 100 days @ \$2 -	\$200.
45 Tons of coal @ \$6 -	270
oil, packing and repairs	100
Interest on cost of works a	<u>693</u>
	<u>\$1263.00</u>

Second - Pumping from Ridley Creek by water power - This estimate is based upon furnish 75,000 gallons per day - but the machinery and main will be capable of supplying 150,000 gallons per day.

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Pump, with gearing <sup>and</sup> connections \$2,500  
 Six inch forcing main to connect  
 with main on State St. 2650 ft - 5,000  
 Incidentals and omissions 750 \$8,250

Pumping Expenses

Oil, packing and <sup>Repair</sup> machinery \$50.  
 Attention to pump. 100.  
 Interest on cost of works 495 \$645.

From this it will be seen that in pumping  
 75,000 gallons per day by water power, the annual  
 saving is \$618. This if capitalized will equal  
 \$10,300 - which represents the value of the water  
 power. If the statement made of the minimum  
 water power be correct, this must be taken as the  
 maximum capacity without steam power in seasons  
 of drought. If a steam engine of Thirty horse  
 power were placed in the mill it would give a uni-  
 form power. This would enable the work  
 to be done by water power for about eight months  
 of the year and by steam four months.  
 The expense of this would be.

Thirty horse power engine with  
 boilers &c. \$4,500  
 Engine house foundations & stack 2,000  
 Connections to mill 500  
 Incidentals and omissions 700 \$7,700



Annual Expenses

Interest on first cost	\$462.
Repairs	150
Oil, packing &c	50
Coal for sixteen weeks - 144 hrs	
per week - 140 Tons @ \$6-	<u>840</u>
	\$1,502.

A mill so near your town, with a constant power like this would no doubt result to a great advantage, but better buildings and more improved machinery would be advisable

by Henry P. Birkinbine  
"Engineer"

3535 Baring Street  
Philad<sup>a</sup>

March 9<sup>th</sup> 1867.

24  
 The Town Council of the Borough of  
 Media: -

Your Committee appointed to ex-  
 amine as to the propriety of making better  
 arrangements than now exist for the supply  
 of water to the house-holders of the Borough: -

Report: -

That they have directed their  
 attention to the following inquiries: - to wit: -

First: - Is the present supply adequate  
 and sufficiently reliable? -

Second: - Can the supply from the source  
 now used, be increased and rendered rea-  
 sonably certain? -

Third: - Would an abandonment of  
 the present source of supply and a resort  
 to that which could be obtained through  
 a purchase of the water-power owned by  
 Mr. Lewis Palmer on Ridley Creek result  
 favorably to the interest of the tax-payers  
 of the Borough, leaving the matter of cost  
 out of the question? -

Fourth: - What would be the com-  
 parative economy <sup>between</sup> erecting new works  
 at the present source of supply, ~~and~~ the

purchase of the water power at Ridley Creek ~~with~~ the construction of works requisite to make the supply from that source effective? —

They are of opinion, in answer to the first inquiry, — that the present supply is not sufficient for the comfort and health of the inhabitants during the summer months, and that at all seasons of the year it has frequently proved unreliable. —

Second: — That by introducing new power and otherwise enlarging the works the supply from the present source can be increased and rendered reasonably certain for the present demand and for any that is likely to arise for many years. —

Third: — That there would probably arise some benefits to the tax-payers of the Borough, independent of the question of present cost, through a resort to the water-power on Ridley Creek and an abandonment of the present source of supply: — and prominent among the reasons for this, would be the attraction for strangers desiring homes outside of our large cities to settle here bringing with them new capital, adding

to the permanent improvements of the Borough and with their increase to the population, creating new demands upon every branch of trade and traffic amongst us.

The capacity of Ridley Creek to meet all the future wants of the Borough are evident and would leave no room for doubt or apprehension; - whilst a casual observer would be likely to under-rate the amount of water which could be regularly obtained from the present source; - there is no point of household economy of more importance than a full generous and certain supply of pure water; - nothing amongst domestic requirements that conduces more to the health and comfort of a family; - and therefore no subject, upon which persons contemplating a residence in this Borough would inquire into more solicitude; - But as your Committee is of opinion, from all the information they can gather, and as they have answered above to their second inquiry, a sufficient and reasonable supply can by the aid of improved works be obtained from the present source, they believe that all the questions suggested, resolve themselves

at last, into their fourth question of comparative economy. —

In determining this question, they have rested, so far as the cost of works is concerned, upon the estimates furnished by Mr. Pitkin: — there seems upon careful examination to have been made fairly and with judgment; — that Engineer has had a large experience in the planning and construction of similar works; — has a reputation for correctness and is not likely to have hazarded it with a view to any possible advantage that might accrue from an enterprise of no greater magnitude than the one <sup>now</sup> hand; — the scope of his estimates is from its very nature limited, confining itself almost entirely to the cost of materials and labor, as to the extent and character of which there can be but little if any contingency: —

But the other and principal item of cost is involved in the purchase of the water power and mill site, — and the income or proceeds of so much of it, as would not be needed for watering purposes, at least, until the population of the Bronx shall have largely increased. — With regard to the

price for which this water power can be obtained, they are of course, in the absence of any agreement with written stipulations, unable to report definitely: — But inasmuch, as for the reasons above briefly referred to there may be solid and permanent advantages to be derived from the possession and immediate control of this property, your Committee would recommend that steps be taken by the Council, to ascertain in as definite and conclusive form as the nature of the case will permit, — the best terms which can be made with the owner of that property, and that your Board shall then decide with as little delay as may be, whether to proceed to the purchase and improvement of that site, or to make the needed enlargement of the water works now in use. —

Whether there is now sufficient authority from the Legislature to make such financial preparations as will undoubtedly be called for, to make either of the improvements required, or whether the popular sanction, as provided for in the Charter of the Borough, will first have to be obtained, your Committee is not fully advised: and

therefore will make no suggestion further than  
 say, that even if not absolutely necessary,  
 may be expedient, as conducive to harmony  
 in the community  
 confidence, ~~and that the tax-payers~~  
~~at the Borough~~, that whatever course in the  
 premises may be determined, or in Council  
 should be submitted to the tax-payers of  
 the Borough for their approval.

Respectfully submitted

Geo Waldenian  
 Samuel Thomas  
 C. R. Williamson } Council

edin April 12: 1867