DATE.

Report of material Red 1933 by Herbert Ritter

DATE.	No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Feby 2	✓	Recived from Lebmon 90-ft 7/8	Cram chain		Rqe 1
" "	✓	" the Grady - Travers Co 2	Balls cotton	100 lbs	" " 28
" "	✓	Red from store house 3 pcs - 14"	flat Bastand Files		" C 1
"	✓	" " 3. 14"	half rund Bastand Files		" 1
"	✓	1 Pc 3 1/2 x 27" Pipe thread	bush ends	cut 2.17. Handrag [illegible] 26 -- 2013	" " 1
Jan 31	✓	Recived from store house 4 Pcs	4 x 6 x 31 Fir	248	C 29
Jan 31	✓	" 4 "	4 x 8 x 16 "	171	" 29
"	✓	" " 2	8 x 12 x 16 "	288	"
"	✓	" " 1	8 x 12 x 16 " cut to 2 Pcs 8x12x3	48	
" "	✓	" " " 1 Pcs	8 1/2 x 10 x 9 ook	63	Rqe 3
"	✓	" " 6 Pcs	2 7/8 x 12 x 16 Fir	284	" 28
"	✓	" " 2 Pcs	2 1/2 x 6 x 20 "	53	" "
"	✓	" " 24 Pcs	2 1/2 x 12 x 10 "	720	29
"	✓	" 1 Pcs	7 1/2 x 7 1/2 x 3 Fir (5) returned from P.H. Feby 3 /33 Red		OK " 28
"	✓	" " 6 Pcs	3 x 10 1/2 x 36 Fir Returned to be Sized to 2 1/2" Fir 4.		" "
"	✓	" " 6	3 x 10 1/2 x 16 " " " " " "		" 28
"	✓	" " 2	2 1/2 x 6 x 30 Fir		" "
"	✓	3 Pc	5 x 10 x 16 "		"
"	✓	1	5 x 9 x 16 "		"
"	✓	10	5 x 9 x 18 "		"
"	✓	35	1 x 12 x 16 Sap pine Repaired [illegible] 4 strips		C 2
"	✓	6	1 7/8 x 12 x 16 Fir		" 28
"	✓	1	8 x 11 x 6 Fir Returned from P.H. Feby 3/33 ook instead		" "
"	✓	1	8 x 12 x 17 2nd H.Y. pine		"
Feby 6	✓	" store house. 3	Cans Brooms		" 28
" 16		" " 13 gals	Coal oil.		
"		10 "	Black oil		
"		1 1/2 "	Black paint		
"		30 lbs	Tallow		
"		10	cotton waste		
17	✓	615 ft 1	line	161 lbs	C 4
"	✓	300 3/4	"	48 lbs	Rc 5
"	✓	1 Bx "2"	Garlock Packing	2578"	
16	✓	Red from Loco store house	2 - 2" Pittsble Type new safety valves for [illegible] - [illegible] 90 lbs		
" 20	✓	" Strahm 1 Pcs	8 x 11 x 6 ook		C 4
"	✓	" " 1 "	7 1/2 x 7 1/2 x 3 "		
"	✓	" " 7	2 1/2 x 6 x 16		
24	✓	35	1 x 12 x 16 Sap pine strips for B.R. Dam		Rqe 6
24	✓	1 Doz Cans 1 lbs Can	Soda		" 5
"	✓	" 3 gals	Linseed oil		" 4
"		" for Loco Nos 1-2-3+4	1 cylinder bored out + New rings fitted		
"	✓	" "	Steam chest faced + valve blocked		
"	✓	" " "	2 New safety valves fitted on dome tops		
"	✓	Rd on Rd OR No 13044 "	2 Steam tested		
"	✓	"	2 Injector " + Repaired		
"	✓	"	2 Steam pop tested		
"	✓	"	holes in 8 leaves fitted for bolts	Nos - 1-2-3-4	
"	✓	" " 4 Pc	1" x 11 1/2 stay bolts		
Red " 27	✓	" " 1 Bx	5/8 Garlock packing.		C 4
" 28	✓	" " 1 Bale	Lamp Neck		Rqe 4
March 6	✓	from General store house 2	Brooms		Rqe 4
7	✓	" " 1 1/2 gals	2 instead of 3 gals - 1 Can Handle come off		"
" 15	✓	1 Ball asbestos packing	1/2 lbs		C 7
" 20	✓	2 sheets galv Iron 28 x 96			"
23	✓	4. sheets No 2 Emery Cloth			"
"	✓	1 Gross No 18 - 2 1/2 wood screws			"
"	✓	2 lbs Tinners rivets			"
23	✓	1 Soup Ladle			"
	✓	1 [illegible] "			"
"	✓	4 Saucers			"
"	✓	2 Vegetable Dishes			"
"	✓	2 - 8" Pie pans			"
"	✓	1 Bread platter			"
"	✓	1 Large Pitcher			"
"	✓	1 Table vinegar bottle			"
"	✓	6 Desert dishes			"
24	✓	100 ft 1/4 x 2" flat Iron	170 lbs		"
"	✓	2 Pcs Long Hdl rd pointed	shovels		"

Report of Material Received April 1933

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT

Received at Sanatoga April 10th 1933 on car Reading # 25833

Req. no. C 8 18 pcs. 6 X 8 X 18 fir from genl Store House for Bridge no. 10 joists
✓9 " " 12 " " " " " " " " 10 "
✓7 " 4 X 8 X 18 " " " " " " " " 9 "
✓7 " " 12 " " " " " " " " 9 "
✓12 " 3 X 12 X 16 " " " " " " " " 10 floor
✓6 " " 14 " " " " " " " " 9 "
✓12 " " 12 " " " " " " " " 9 "
✓4 " 12 X 12 X 23 fir 2nd Std. " " " " " " " 9 Trestle
✓1 " " 21 " " " " " " " " " 9 "
✓1 " " 18 " " " " " " " " " 9 "
✓5 " " 16 " " " " " " " " " 9 "
✓2 " 6 X 12 X 20 " " " " " " " " " 9 "
✓2 " 4 X 8 X 24 " " " " " " " " " 9 "
✓1 " 3 X 13½ X 20 new fir " " " " " " 10 Wall Plate
✓1 Keg 60 D cut nails 100# " " " " " " 9+10 floor etc.
✓7" cut Spikes 25# " " " " " " trestles
Received by baggage Service at Pottstown April 14th 1933

Req. C9 Received at Phoenixville on car no 74847 Rdg. April 19th 1933
✓1 car of Shamokin Pea coal 48 tons 500# for Dredge and Tug Dolphin
Req. C-9 50# Boiler chemical Rec. at Phoenixville by freight April 19th 1933
Req. C-9 ✓1 gal Screw cutg. Oil Rec by freight at Phoenixv April 24th 1933
C 9 ✓2 pcs. 2½ X 8 X 8' Oak Rec. by freight at Phoenixv May 10th 1933
" C9 ✓1 lb upholsterers tacks no. 16 " at Ship office Rec. May 11th 1933
" C 9 ✓1 Doz. 12" Hack Saw blades " " " " June 16 1933

Req. C 10 ✓2 bars ½ Sq. iron 17# by freight at Phoenixv May 31st 1933
" C 10 ✓1 Keg 60 D cut Nails 100# " " " Birdsboro June 22nd 1933
" C 10 ✓1 " 7" cut Spikes 100# " " " " " "
" C 11 ✓5/8 Diam. Manila line 35# " " Royersford " 27 "
" C 4 ✓yellow paint 1½ Gals. " baggage at Phoenixv June 30 "
" C-11 ✓Ruberoid Roofing 3 Rolls " freight Manayunk July 4 "
" C-10 ✓5/8 rat Tail 12" rd. Bast. files 2 " Baggage Phoenixv " 6 "
" C-11 ✓4 pcs 6 X 12½ X 40 fir Car no. 25783 at Venice Branch July 10 1933
" ✓28 " 4 X 8 X 16
" " ✓1 " 3 X 13½ X 24 "
" " ✓3 " " 20' "
" " ✓12 " 3½ X 8½ X 19 "
" " ✓93 " 2 X 12 X 16 "
" " ✓5 " " 16 W.P.
" " ✓27 " " 14
" " ✓3 " 1 X 12 X 16 Barn Pine
" " ✓62 " 1 X 4 X 16 Y. Pine flooring
" " ✓19 " 1 X 4 X 4 " "
" " ✓47 " 1 X 3 X 16 " "
" " ✓4 " " 14 " " "
" " ✓19 " " 6 " " "
" " ✓5 " " 4 " " "
" " ✓Kerosene 1 bbl.
" " ✓Black Oil 5 Gals.
" " ✓5" cut Spikes 2 Kegs
Req. C 13 1 Brass gauge cock Stem A14958 2nd Std. Rec. at Shop Office July 20th 1933
Req. C 10 ✓4 pcs 3½ X 10½ X 32 fir car no. 27245 at Gibraltar July 27 1933
✓2 " 3½ X 8½ X 22 "
✓4 " 3 X 10 X 20 "
✓6 " 6 X 12 X 4 "
✓2 " " 22 "
✓1 " " 16 Sec. Std. W. P.
✓3 " " 12 " "
✓3 " 3 X 13½ X 16 fir
✓10 " " 18 "
✓2 " 12 X 12 X 17½ 2nd Std Y. P.
✓7 " " 20 " "

Report of Material Received July 1933

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Req. C10	1 pc.	10x12x17 creo 2nd Hd. Y.P.	Car no. 27245 at Gibraltar	July 27	1933
	4 "	12x12x18 2nd Hd. Y.P.			
	4 "	" 12 " "			
	1 "	10x12x16 " " "			
	2 "	12x12x10 " " "			
	1 "	" " 16 " " "			
	1 "	3x10x14 Oak			
	1 "	6x8x12 fir			
	32 "	4x8x16 "			
	933'	Sec. Hd 2" Y.P. plank			
Req. C12		Tinkers cement 4 lbs.	at old car Shops	aug. 3rd.	1933
" " 14		40 D wire nails 50 lbs	" " " "	" "	"
" " 14		40 D " 50 "	" " " "	" "	"
" " 14		1 Keg 7" cut Spikes 100 "	" " " "	" "	"
" " 12		Linseed Oil 1 Gal "		" 10	1933
" C15		3/4 Diam. manila line 150'	at Hamburg by baggage	" 21	1933
" C15		Ruberoid Roofing 1 Roll - 108 Sq ft. at	" " freight	" 22	1933 order no 898
" C15		Ruberoid Roofing 3 " 324 "	" Lock no 72 " "	" 29	"
" C15	4	bar solder 2 lbs	at Shop	" 29	"
order no 962	1	bag cement 1 bag	at Lock no 43 truck	" 29	"
Req. C 10	5"	Tapered Saw files 6	" Shop	Sept. 1	"
" C 15		5/8" nuts 5 doz.	" "	Aug. 29	"
" C 15	8	corn brooms 2	"	Sept. 1	"
" C15	2 pcs.	2x4x4'6" N.C. pine	Rec by freight	Sept. 2	" order no 898
" C15	5	" " 4'	" " "	" 2	" " " "
" C15	5	1x6x16 W.P. German Siding	" " "	" 2	" " " "
" C19	1	Roll Ruberoid Roofing	" " "	" 20	
" C18	10	Bags cement	" " " from Store House	" 20	
" C18	2	"		" 26	
" C18	3200#	J Gravel	Rec from Wm. Davis Jr. + co West Conshohocken	" 18	
" C18	5400#	3/4 Stone	" " " " " " " "	" 18	
" C18	5	bags Sand	" " " " " " " "	" 20	
" C18	3600#	J Gravel	" " " " " " " "	" 25	
" C18	5000#	3/4 Stone	" " " " " " " "	" 25	
" C18	8	bags cement	" " " " " " " "	" 25	
" C20	20	- 7/8 x 12" Lock Spikes 26#	Rec by freight	" 25	
" C20	1/2	Keg 5" cut Spikes 50#	" " "	" 25	
" C18	1 pc.	12x12x12 creo. Y.P.	Rec. at Pencoyd Req. # 21231	" 27	
"	2 "	6x12½x24 fir new			
	2 "	" 16 " "			
	8 "	5½x8x22 " "			
	3 "	4x8x16 " "			
	1 "	10x12x16 creo. Y.P. Sec. Hd.			
	3 "	10x12x5 " " " "			
	1 "	4x8x24 Sec. Hd W.P.			
	1 "	3x10x15 fir new			
	1 "	4x5½x18 " "			
	1 "	4x5½x38 " "			
	1 "	3x10x16 " "			
	23 "	2x12x16 " "			
	3 "	2x10x16 " "			
	1 "	2x12x16 Oak Good Quality			
	1 "	" " 8 " " "			
	2 "	2x3x16 " " "			
Req. C19	2 "	3x4x16 N.C. pine new			
	11 "	2x12x16 fir new			
	15 "	2x10x16 " "			
	4 "	2x12x12 W.P. #3 Barn			
	20 "	1x6x14 W.P. Fencing			
	2 "	1x12x16 Barn Pine #3 Barn			
	1 "	12x14x25 Y.P. Sec Hd.			
	24 "	2x12x16 fir new			
	7 "	4x8x16 " "			
	3 "	4x4x8 " "			
	1 "	6x10x16 Y.P. creo. new			
	2 "	8x12x12 " "			
	2 "	10x12x10 " "			
	1 "	10x12x12			

Material Received Sept. 1933

DATE. 1933	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Sept 29	✓ 5#	8D wire nails.	Dock #3142 order no 898		Req. C 15
	✓ 2 pr.	6" 2nd Hd. Strap Hinges			
	✓ 1	6" Sec " Hasp + Staple			
Sept 27	✓ 25	3/4" Sq x 16" chisel pt. Dock Spikes	129# Rec at Pencoyd car no. 21231 Rdg.		Req. C 20
	✓ 114	5/8" " x 10" " " " "	48 " " " " " " "		" "
	✓ 36	5/8" " x 12" " " " "			
	✓	5" Cut Spikes	50# " " " " " " "		" 19
	✓ 25	3/4" Sq x 12 chisel pt. Dock Spikes	38# " " " " " " "		" 19
	✓	5/8" x 12 " " " "	7# " " " " " " "		" 19
	✓ 2	6" Strap Hinges	" " " " " " "		" 19
	✓ 1	Thumb latch	" " " " " " "		" 19
	✓ 40	D wire nails	25# " " " " " " "		" 19
	✓ 8	D " "	6 " " " " " " "		" 19
Oct. 6	✓ 3 pcs.	1 x 12 x 4 Birm pine	Rec. at Haverford by freight order # 898		" C 15
" 6	✓ 5 "	" 5 " "	" " " " " "		" C 15
" 14	✓ 2 "	2 x 10 x 5 fir	" " " " " "		" C 15
" 18	✓ 3 "	3 x 6 x 4 fir	" " " " " "		" C 15
Oct 17	✓ 2	6" Strap Hinges 2nd Hd.	Rec by baggage Plymouthville Order # 899		Req. C 23
	✓ 1	Thumb latch			
	✓ 8	D wire nails	8#		
	✓ 10	D " "	4#		
17	✓ 1	roll rubervid roofing	108 Sq. ft. by freight Plymouth		
17	✓ 1	bag portland cement	94# " " "		
Oct. 11	✓ 6	Long Handle rd. pt. #2 Shovels	S.H. Rec at Old car Shop		Req C 18
" 11	✓ 3	" " #3 Scoop Shovels	S. Hd. " " " " "		" C 18
Oct 11	✓ 2	4# Chopping Axes Sec Hd.	Rec. Old car Shops		Req C 23
" 11	✓ 2	Axe Handles	" " " "		" "
Oct. 11	✓ 300 ft.	7/8 Dia. Sec Hd Manila rope	175# Rec Old car Shop		Req. C 22
"	✓ 300 "	3/4 " " " " "	40# " " " "		" C 22
" 11	✓ 2	corn brooms	Old car Shop		" C 23
" 11	✓ 300	7/8" nuts Square	8# " " "		" C 23
" 11	✓ 16	5/8" bolts 19" under Head	" " "		" C 20
" 11	✓ 16	5/8 Sq nuts	3# " " "		" C 20
" 11	✓ 16	5/8 cut washers	1½# " " "		" C 20

Material Rec. Oct. 1933

DATE.	CARGO. No. of.	CHARACTER OF.		CONSIGNMENT. TO WHOM.	PORT OF		INSTRUCTIONS AT
Oct. 14	130	7/8 x 14 Dock Spikes	195#	by baggage at	Bridgeport-		Reg C 22
" 18	4 pcs	10 x 12 x 10 fir		by freight-	"	Rag #24509	" C 20
" 18	2 "	10 x 10 x 26 "		"	"	"	" C 20
" 18	3 "	4 x 10 x 18 "		"	"	"	" C 20
" 18	24 "	4 x 12 x 18 "		"	"	"	" C 20
" 18	12 "	10 x 10 x 36 "		"	"	"	" C 22
" 18	12 "	8 x 10 x 18 "		"	"	"	" C 22
" 18	18 "	4 x 8 x 18 "		"	"	"	" C 22
" 18	2 "	6 x 6 x 28 "		by freight	Menayunk		" C 22
" 18	5 "	4 x 8 x 28 "		"	"		" C 22
" 18	2 "	4 x 6 x 28 "		"	"		" C 22
" 18	40 "	4 x 8 x 18 "		"	"		" C 22
" 21	1 "	2 x 6 x 8 "		"	"		" C 22
" 21	10 "	2 x 4 x 12 "		"	"		" C 22
" 21	7"	cut Spikes	75#	"	"		" C 22
" 21	8	3/4 x 12" Lag Screws		"	"		" C 22
" 21	260	3/8 x 2 1/2 "		"	"		" C 22
" 23	140	1/2" x 10 Dock Spikes	112#	"	Bridgeport "		" C 22
" 21	4 pair	no 8 3/4 length Rubber boots			Med car Shop		" C 23
" 23	10 pcs.	2 x 12 x 16 fir		"	Bridgeport car no 6746		" C 20
" 23	3 "	3 x 8 x 8 Oak		"	"	"	" 22
" 23	3 "	2 x 8 x 8 "		"	"	"	" 22
" 23	2 "	5 1/2 x 12 1/2 x 31 fir		"	"	"	" 19
" 23	1 "	12 x 12 x 12'6" "		"	"	"	" 19
" 23	1 "	6 x 10 x 16 "		"	"	"	" 19
" 23	3 "	2 x 12 x 16 "		"	"	"	" 19
" 23	2 "	3 x 9 x 8 Oak		"	"	"	" 19
" 23	1 "	2 x 10 x 10 "		"	"	"	" 19
" 25	2 "	4 x 8 x 18 fir		Rec from Keeley Lumber Yard			Direct order
Oct. 27	2 pcs.	3 x 4 x 16 N.C. Y.P.		by freight- Lessport-	Order no. 900		Reg C 23
" "	7 "	2 x 12 x 16 fir		" " "	" "		" " "
" "	8#	40 D wire nails		" baggage	" "		" " "
" 28	200 ft	3/4 Diam. rope	31#	at Local shop			
Nov. 4	2 1/2	gals. cream color paint-		by freight-	Bridgeport-		Reg. C 22
Nov. 6	1 pc.	10 x 16 x 22 Sec'd hd. creo. fir		by freight	car no. 20303	Gibraltar	Reg. C 20
	1 "	" " 23					
	4 "	10 x 14 x 24					
	1 "	10 x 16 x 24					
	2 "	" " 24					
	3 "	10 x 14 x 18					
	1 "	10 x 12 x 22					
	4 "	5 1/2 x 8 x 22 new fir					
	2 "	" " 20					
	2 "	6 x 8 x 22					
	1 "	" " 20					
	1 "	" " 16					
	3 "	5 1/2 x 8 x 14					
	52 "	2 x 12 x 14					
Nov. 13	10 pcs	12 x 12 x 18 Y.P. Sec'd hd.		car no. 20338	Rag. at Burdsboro		Reg. C 14
	6 "	" " 16 fir					
	3 "	6 x 12 x 30 W.P. " "					
	2 "	" " 12 fir	new				
	2 "	6 x 8 x 9 "	"				
	2 "	" " 9 "	"				
	40 "	4 x 8 x 16 "	"				
	6 "	3 x 12 x 16 "	"				
	5 "	3 x 10 x 16 "	"				
	1 "	5 x 10 x 18 "	"				
	1 "	5 x 8 x 14 "	"				
	4 "	3 x 10 1/2 x 24" "	"				
	4 "	" " 20 "	"				
	1 "	8 x 12 x 5 Y.P. creo. Sec'd hd.					

Material received in Nov. 1933

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Nov. 15	✓ 15	Gals. Kerosene	by baggage at	Phoenixville	Reg. C. 25
" 15	✓ 4	R. R. pat locks	at Old car Shops		" "
" 15	✓ 6#	8D wire nails	at old car Shops	for Lock Houses	" "
" 21	✓ 1	mine car Stove good sec'd	by freight at Bridgeport		" "
" 21	✓ 3	lengths 4½" Dia Stovepipe	" "		" "
" 21	✓ 1	pc. 4½ " " elbow	" "		" "
" 21	✓ 1	pc. 1×12×16 Sapp pine	" "		" "
" 21	✓ 1	" 1×12×7 " "	" "		" "
" 21	✓ 1	Door 2'2" × 6'6" × 2⅜	" "		" "
" 21	✓ 2	pcs. 1×6×16 Y. P.	" "		" "
" 21	✓ 1	" 1×6×8 "	" "		" "
" 21	✓ 1	Roll ruberoid roofing freight claim	" "		" "
" 23	✓ ½	Ton Blacksmiths coal	from S. L. Shoemaker	Phoenixville Pa.	" "
" 25	✓ 2	lengths 18" corrg. pipes 20 ft long	by freight at Freeport		" 26
" 28	✓ 1	connecting band for 18" pipes			"
	✓ 2	pcs 3×8×16 for new	by freight at Phoenixville		" 23
	✓ 3	" 3×4×16 N. C. pine			
	✓ 50	1¼" T. & G. Y. P. flooring			
	✓ 3	pcs 1×10×5 W. P.			
	✓ 2	" 1×20×4'8" W. P.			
	✓ 23	" 1×6×14 W. P. fencing			
	✓ 7	" " 12 " "			
	✓	20 ft 1" lining			
Dec 1	✓ 6	Doz. ½" Sq. Nuts	at old car Shops.		Reg. C 25
	✓ 6	" ⅜" " "			
	✓ 6	" ¾ " "			
	✓ 6	" ⅞" Cent Washers			
Nov 29	✓ 12	Wooden Scoop Tray Wheel barrows	by Freight at	Phoenixville Pa	
Dec 7	✓ 6	pick Handles Sec'd.	at old car Shops	Rdy. Pa	Reg. C 25
	✓ 3	mall Handles			
	✓ 3	Sledge Handles			
Dec. 8	✓ 1	Hackmatack Knee	at Phoenixville	P. R. R. Freight	Reg C. 24
Dec. 12	✓ 6	pcs. 1×6×12 W. P. flooring	by freight at Linfield order # 909		Reg. C. 25

Material received Dec 1933 and Jan 1934

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Dec. 20	✓ 2 pcs. 2 ft. length 5½ Dia. Stove pipe sections		at Shop.		Reg C 27
	✓ 4 " " 5" "		"		" "
	✓ 4 " " 4½ "		"		" "
	✓ 2 " 4½" Stove pipe Elbows		"		" "
1934 Jan 2.	✓ 1 pc 2 ft. length Stove pipe 5½" one end 22½ cir at the end		at Shop		Reg. C. 27
Jan 11	✓ 2 corn Brooms - at Shop.				Reg C 2
" 11	✓ 5 ¾ x 2" boiler Studs		at Shop		" 2
" 11	✓ 1 1¼" x 1½" Brass nipple for injector line		at Shop		" 2
" 11	✓ 1 1¼" Service Ell Galv.		at Shop		" 2
" 11	✓ 1 1½ Rd. way Stop cock				" 2
" 11	✓ 600 ⅜ x 1" flat Head rivets				" 1
" 11	✓ 50 ⅜ x 2" flat Head rivets				" 1
" 11	✓ 36 ⅝ x 1¼ countersunk rivets				" 1
" 11	✓ 75 ⅜ x 1¼ bolts				" 1
" 11	✓ 25 ⅜ x 2½ bolts				" 1
" 15	✓ 1 pc. 8 x 12 x 6 Oak	48'	at Plymouth. Rag car # 20590		Reg C 26
	✓ 1 " 7 x 7 x 4 "	16'			
	✓ 1 " 3 x 12 x 16 "	48'			
	✓ 5 " 3 x 12 x 12 "	180'			
	✓ 2 " 3 x 10 x 16 "	80'			
	✓ 1 " 3 x 8 x 16 "	32'			
	✓ 2 " 2 x 12 x 16 "	64'			
	✓ 4 " 2½ x 8 x 8 "	53'			
	✓ 12 " 2½ x 7 x 16 "	280'			
	✓ 8 " 3 x 12 x 18 "	432'			
	✓ 6 " 3 x 12 x 16 fir	288'			
	✓ 6 " 2½ x 10 x 32 "	400'			
	✓ 6 " 2½ x 10 x 16 "	200'			
	✓ 24 " 2½ x 12 x 9 "	450'			
	✓ 14 " 2 x 12 x 16 "	448'			
Jan. 16	✓ 4 pcs. 3 x 12 x 12 "	144'	Truck No. 47	Shop truck	Reg C. 20
"	✓ 2 " 2 x 12 x 16 "	64'	" "	" "	" "
" 18	41# Putty		Truck #43 Order # 911	Shop truck	Reg. C. 27
" 18	✓ 2 Pair 8" Sec. Hd. Strap Hinges		" "	"	"
" 18	✓ 2# 8D wire nails		" "	"	"
" 18	✓ 3 Rolls Ruberoid Roofing		" "	"	"

Material Rec. in Jan. Feb. 1934

DATE.		CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Jan 18	✓	2	pcs. 1½ × 12 × 11' fir 33'	Lock #4 3 order #911	Shop truck	Reg. C 27
"	✓	1	" 2 × 12 × 6 " 12'	" " "	"	" "
"	✓	1	" 1 × 8 × 6 Barn pine 4'	" " "	"	" "
"	✓	14	" 1 × 12 × 16 Barn Pine 224	" " "	"	" "
"	✓	2	" 1 × 12 × 16 B. P. Surfaced 32	" " "	"	" "
"	✓	1	" 1 × 12 × 10 " " 10	" " "	"	" "
"	✓	1	" 1 × 8 × 8 Barn pine 5'	" " "	"	" "
"	✓	4	" 1 × 6 × 14 W.P. flooring 28'	" " "	"	" "
"	✓	1	Gal Yellow paint	" " "	"	" "
"	✓	½	" white "	" " "	"	" "
" 22	✓	2	tons Pea coal from Shanamann	Phoenix	at Lock #60	Reg C 2
" 26	✓	1	pc. 2" × 2" × 18" angle iron	at Shop		" C 1
" 29	✓	1	¾ × 1½" nibble	at Shop		" C 2
" 30	✓	1	5/8" boiler stud tap.	at Shop		" C 2
" 30	✓	1	13/16 boiler stud tap	at Shop		" C 2
Feb. 3	✓	2	3/16 × 36" × 53" Steel Hull Sheets	Lock #60	by baggage 205#	" C 1
Feb. 9	✓	6	pcs ½" Rd. iron 28#	by freight at Phoenix.		" C 25
Feb. 14	✓	2	pcs 3/16 × 36 × 34" Steel Hull Sheets	Lock #60	by baggage 209#	" C 1
" 16	✓	1	pc. 5/8 × 1" × 4 flat iron	at Shop	8#	" C 4
" 16	✓	2	wheelbarrows iron tray Sec. Hd.	at Shop		" C 4
" 16	✓	3	pcs 3/16 × 2 × 20 flat iron	at Shop	75#	" C 4
" 15	✓	1	pc. 1/16 × 40 × 40 Garl. #900 steam chest Packing	7#	at Phoenix. Pass.	" C-4
15	✓	30	fibre water bottle washers		at Phoenix Pass	" C 4
15	✓	36	Rubber water bottle washers		at Phoenix Pass	" C 4
15	✓	1	ball asb. gl. valve Pkg. ½"		at Phoenix Pass	" C 4
" 16	✓	250	3/8 × 1" flat Head Rivets	at Shop	Delivered L. 60 11#	" C 4
" 19	✓	4	-1" C.I. washers Sec. Hd.	9#		Reg. C-3
" 19	✓	4	7/8 C.I. " " "	4#		" C-3
" 19	✓	2	¾ C.I. " " "	1½#		" C-3
" 19	✓	2	Rattan Brooms	by freight Phoenix.		" C-4
" 21	✓	4	Pcs. 2 × 12 × 16 Oak	by freight Phoenix,	car #25561	" C-4
" 21	✓	4	Pcs 2½ × 10 × 16 Cypress	" "	"	" C 4
" 21	✓	3	" 3 × 10 × 32 fir	" "	"	" C 5
" 21	✓	2	" 5½ × 10 × 14'6" fir	" "	"	" C 5
" 21	✓	6	" 3 × 12 × 16 fir	" "	"	" C 5

Material Rec. in Feb. and March 1934

DATE.	No. of	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Feb. 21	✓ 2	pcs. 4 x 8 x 16 fir by Freight at Phoenix	car # 25561		Req. C-5
" 21	✓ 26	-1¾" x 5' 4¼" - 42 - 1¾ x 5' 4⅜" - 36 - 1¾ x 5' 4½" Boiler tubes for Dredge		"	Req. C-1
" 21	✓ 2	" 8 x 12 x 16 Oak "	"	" 21-25	" C 26
" 24	✓ 104	1¾ copper ferrules blue 8# by Mess. at Shops "		Rec. without	Requisition
" 26	✓ 24	pcs. 4 x 8 x 16 fir by Freight	Saratoga Rdg car # 23546		Req. C 3
" 26	✓ 12	" 3 x 8 x 16 "			
" 26	✓ 1	" 3 x 8 x 12 "			
" 26	✓ 1	" 3 x 8 x 14 "			
" 26	✓ 2	" 6 x 8 x 4 "			
" 26	✓ 4	" 3½ x 8½ x 38 "			
" 26	✓ 2	" 3½ x 8½ x 22 "			
" 26	✓ 1	" 3½ x 8½ x 19 "			
" 26	✓ 4	⅞" Rods			
" 26	✓ 2	¾" x 22" bolts			
" 26	✓ 2	1" x 2' 2¼" bolts			
" 26	✓ 5	⅝" x 17" "			
" 26	✓ 5	⅝ nuts ⅝#			
" 26	✓ 5	⅝" cut washers ⅜#			
" 26	✓ 2	1" nuts 1#			
" 26	✓ 8	⅞" " 3#			
" 26	✓ 2	¾" " ½#			
" 28	✓ 4	½" x 3½" beveled washers 20#			
" 28	✓ 2	Glasses for water Gauge	already Rec. not on Req.		
" 27	✓ 1	barrel of boat Pitch	at Phoenix by Freight		Req. C 4
Mar. 5	✓ 1	Gal. Linseed Oil by freight			Req. C 4
" 5	✓ 1	Pt. Japan Drier " "			" "
" 9	✓ 2	pcs. 1" x 42" x 48" Sheet asbestos by freight			Req. C 4
" 9	✓ 15	Gals. Brown Car paint by freight			" C 4
" 9	✓ 3	" Red lead paint " "			" C 4
~~" 12~~	✓ 2	Gals white paint " "			" C 4
" 13	✓ 2	Steel Hull sheets	Baggage 3/16 x 36 x 56"	220# Req. C 1 and 4	" C 4
" 13	✓ 3	Doz. 2½" #18 wood Screws mess.			" C 4
" 16	✓ 1	Bundle ⅜" Sq. iron 15# by freight			" C-6
" 16	✓ 60	ft. ⅝" manila line 10# by Baggage			" C-6
" 16	✓ 50	# Boiler Compound from Henry Bowers Chemical Co Philada			C-6
" 19	✓ 1	Doz. 1# cans Caustic Soda by Baggage			Req. C 6
" 19	✓ 1	Ton Bituminous Blacksmith coal from S. L. Shannon Phoenix Pa			" "
" 19	✓ 500	ft 1" Dia manila line 133# from Rueck Cordage Co. Easton Pa			" "

Material Received in Mar. apr. & May 1934

DATE.	CARGO. No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	CONSIGNMENT. PORT OF	INSTRUCTIONS AT
Mar. 22	✓	1 Steel Sheet 3/16 x 36 x 54"	by baggage from Iron Ship		Req. C 4
" 30	✓	15 Gals Kerosene	by freight		" C 6
" 30	✓	10 " Red engine Oil	" "		" C 6
" 30	✓	10 " Black oil	" "		" C 6
" 30	✓	5 " Steam cylinder oil	" "		" C 6
" 30	✓	40# Tallow	" "		" C 6
" 30	✓	4 pcs. Boiler Tops	" Baggage were repaired		" C 1
" 30	✓	1 Brass Stem bearing Bushing	by baggage		" C 1
Apr. 3	✓	4 Safety valves were repaired	Rec. by baggage Hauled by Croll		
" 3	✓	2 Steam Gauges " "	" " " " "		
" 4	✓	2 piston guide brasses	" " " no hauling charge		Reg C-1
" 6	✓	1 Section Stack 1/8 x 13½ x 26"	" " " " " "		" C-1
" 6	✓	1 Sheet iron Bonnet	" " " " " "		" C-7
" 12	✓	2 Rattan Brooms	Rec. by messenger no charges		" C-7
" 17	✓	4 corn brooms	" " " " "		" C-7
" 17	✓	3 12 Qt Galvd iron buckets	" " " "		" C7
" 17	✓	12 - 12" Hack Saw blades	" " " "		" C-7
" 17	✓	6 - Sheets ∓ 2 emery cloth	" " " "		" C7
" 17	✓	1 3/8" reamer	" " " "		" C7
" 17	✓	1 1/2" "	" " " "		" C7
" 17	✓	2 Wooden field Water buckets Rec'd	" " " "		" C7
" 19	✓	1 box ½ Garlock packing #150 - 23¾#	by mess	not on requisition	
" 19	✓	1 " 3/8 " " " 4	"	"	
" 19	✓	3 Steam Gauge gaskets	"	"	
" 19	✓	#7 Boiler mud plug	"	"	
" 21	✓	2 dusting brushes	"		Reg. C-7
" 26	✓	153 copper flue ferrules 11#	by Mess.		Reg. C-9
Note - Had 1 Steam gauge retested april 25th, and another one tested april 26th 1934 and found O.K.					
" 27	✓	1-15/16 x 18" Stay bolt tap - to be returned.	Returned april 30th 1934		
" 27	✓	4 - 1 7/8 flue expender rollers - to be returned.	Returned May 3rd 1934		
May 2	✓	8 L 1¾ x 5' 1¼ and 56 - 1¾ x 5' 1⅛" boiler tubes with Swedged Ends	Received by freight box car Rdg #12402, Hauled by Rapp.		Reg. C-9
May 2	✓	1 Dipper bucket	" " " "		" "
" 2	✓	Brass Thrust bearing	" " " "		" "
May 4	✓	2 Pcs, 1" Steam Hose 15' long	by baggage		Reg. C 7
" 4	✓	2 pcs 15/16 x 8" long Stay bolts 2 1/2#	"		" C 9

Material Rec. in May, June, 1934

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
May 9	✓	2 Safety pops Taken to Loco Shop to get readjusted Dredge Tug			
" 11	✓	Rec. 2 Safety pops that were Taken to Loco Shop			
" 10	✓	57 T. 1210 cwt. Pea coal at Pluvett car # 71822 Reg.			Reg. C-8
" 15	✓	1 Roll Rubered Roofing by freight no Hauling charges			" C-10
" 16	✓	2 pr. 6" Strap Hinges by mess			" "
" 16	✓	1 thumb latch " "			" "
" 18	✓	2 pcs. 3X4X16 n.c pine by freight no Hauling charges			" "
" 18	✓	2 " 2X4X16 " " " "			" "
" 18	✓	20 Pcs. 1X6X16 y.P. lining " "			" "
" 18	✓	20 Pcs. 1X6X14 W.P. fencing "			" "
" 18	✓	6 " " 12 " " "			" "
" 18	✓	1 " 1X20X8' f.f. clear W.P. "			" "
" 25	✓	1 Grass Scythe allready Received not on Reg. Placed on			Reg. C. 11
June 7	✓	1 Grass Scythe for coushwicken canal			" C 11
" 7	✓	2-7/8 X 4 1/4 lubricator Glasses by mess			" C 11
" 7	✓	1 Grass Scythe & Snathe not on Reg. Sprung city canal			
" 7	✓	2 Gals. Lead color paint by Freight			Reg C. 10
" 15	✓	100 ft. 3/4 Dia manila line by Baggage no Delivery charges			Reg C 11
" 18	✓	5 Gals. Black Oil by Fort. mark.			" C 11
" 18	✓	1 pc. 2X10X3'6" fir Surf. by Fort Marseille order #916			" C 11
" 18	✓	2 " 1X6X12 W.P. flooring " "			" C 11
" 18	✓	9 " 2X12X16 fir " "			" C 11
" 18	✓	2 " 2X10X16 fir Surf. " "			" C 11
" 18	✓	2# 8P wire nails by baggage			" C 11
" 18	✓	4# 20 Wire nails " "			" C 11
" 14	✓	270 lbs. Grit from Grant Rapp			Not on Reg.
" 14	✓	12 bags Portland cement from Grant L. Rapp			" " "
" 27	✓	5 bags Portland cement from Grant Rapp			Not on Reg.
May 28		Had 13 Hand chisels & 2 cutters Dressed at Loco Shop			
June 14		Had 10 Hand chisels Dressed at Loco Shops			
July 2		Had 12 Hand chisels & two cutters Dressed at Loco Shops			
June 7		Rec'd. tested Pop from Loco Shop for Dredge,			
June 15		Rec'd. tested pop from Loco Shop for Tug			
June 26		R. D. Bertram 1162 Green St. Rdg. Pa. Tested the Pops on ~~Tug~~ Dredge and Tug and Condemned them.			
July 30		Rec'd. Pump Scow pop & took it on the Dredge aug. 1st. 1934			

Material Received in July, 1934.

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
July 9	✓ 2	Corn Brooms, by mess.	Mechanic Scow		Req. # 12
" 13	✓ 5 Gals	Red engine oil by "	Pug and Dredge		" 12
" 13	✓ ½ Gal.	Black boiler paint by mess.	Pug		" 12
" 13	✓ 10 lbs.	cotton waste " by mess.	Pug + Dredge		" 12
" 9	✓ 1 Gal.	Yellow paint by baggage to Mohrsville	order #916		" 11
" 9	✓ ½ "	Lead color paint "	" To "	" "	" 11
" 17	✓ 3 pcs.	3×8×16 Y.P. from	Samuel Happel	emergency order	not on Req.
" 17	✓ 5#	Ruberoid roofing nails	by mess		Req. C 12
" 17	✓ 5#	Dickers cement	" "		" 12
" 20	✓ 1 Gal.	Lead color paint	by mess, for Lock House # 33		" 12
" 20	✓ 2 Gals	White Paint	by mess for Lock House # 59		" 12
" 24	✓ 6 pcs.	5/8×10" Dockspikes 7#	for Lock House # 51	order # 918	" 13
" 24	✓ 8D	wire nails 10#	" " " " "	"	" 13
" 24	✓ 20D	wire nails 5#	" " " " "	"	" 13
" 25	✓ 1 pc.	12×12×36 Y.P. Sec Hd.	Rec. at Conshohocken	Rdg. Car # 20187	Req. C. 12
" 25	✓ 5 pcs.	6×12½×18' fir	" " "	" " "	" "
" 25	✓ 10 "	4×8×16 "	" " "	" " "	" "
" 25	✓ 2 "	3×6×16 "	" " "	" " "	" "
" 25	✓ 39 "	2×12×16 "	" " "	" " "	" "
" 25	✓ 50 "	2×12×16 " jointed	" " "	" " "	" "
" 25	✓ 40 "	2×12×14 " "	" " "	" " "	" "
" 25	✓ 10 "	1×12×16' #3 Barn pine	" " "	" " "	" "
" 25	✓ 2 "	4×12×8' Oak	" " "	" " "	" "
" 25	✓ 5 "	3×12×5'7" " Surfaced	" " "	" " "	" "
" 25	✓ 5 "	3×12×4'6" " "	" " "	" " "	" "
" 25	✓ 2 "	3×10×14 "	" " "	" " "	" "
" 25	✓ 3 Kegs	40D wire nails 300#	" " "	" " "	" "
" 25	✓ ½ "	20D wire nails 50#	" " "	" " "	" "
" 31	✓ 2 pcs.	4×8×16 fir	Shipped to Birdsboro by	Freight Order # 918	" 13
" 31	✓ 3 "	3×6×16 "	" " "	" " "	" 13
" 31	✓ 15 "	7/8×6×14 W.P. flooring	" " "	" " "	" 13
" 31	✓ 1 "	1×12×6' #3 barn pine	" " "	" " "	" "
"	✓ 1	bevel gear # 561			" 13
"	✓ 1	" pinion "			" 13

material Received in august & September 1934

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Aug. 4	✓ 1	Sec. Hd. Grass Scythe	Lock no 69-70 by mess.		not on Req/. Req C-17
" 4	✓ 1	Sec. Hd. Pitch fork	" " " "		" "
" 7	✓ 10#	U.S. Navy Pakura From Philada. Port Richmond Store House	Section Scow Lock #68 " "		" "
" 9	✓ 6	Hand hammer handles by mess	for Mc. Scow Supplies		Req. C-14
" 11	✓ 1	Sec. Hd Grass Scythe	" " Fred D. Zins. 6 mi level,		Req. C17 not on Req/.
" 13		John Whelan tested the props on Dredge Tug and condemned them			
" 20	✓ 2	Gals. Rubrine Paint by mess	Lock House no 80		Req. C-14
" 20	✓ 3	Gals. Rubrine Paint " "	" House #83		" 14
" 22	✓ 5	Gals. Rubrine Paint by Freight	Lock House #66		" 14
" 31	✓ 110	ft. 5/8" Rope 18# by mess	for Lock no 69-70	not on	Requisition
" 31	✓ 1	Sec. Hd. Grass Scythe	for Hamburg level	not on	Requisition
Sept. 8	✓ 3	Wooden water Buckets, by mess,	for Dredge use		Req C-18
" 8	✓ 3	Pcs. 10×12×16 fir by co truck,	for Bridge no, 65		Req C-15
" 10	✓ 6"	cut Spikes 2# by mess.	Bdgs. nos. 63-64-65		" "
" 10	✓ 7"	cut Spikes 8# " "	" " " " " "		" "
" 10	✓ 2	pcs 10×12×14 fir by Frgt.	Box car #593113 C.N. ST P+P. Milwaukee, at Rogersford Station		Bdge # 6 " "
" "	✓ 14	" 8×12×24 " " "	" " " " 6		" "
" 10	✓ 2	pcs. 10×12×16 fir	Box car no. 2282 Rdg. Bdgs. 8½ & 6 mile level Bdge #39 at Birdsboro Frt. Station		" 16
" 10	✓ 10	" 10×12×8 fir	Bdges # 42-44×39		
" 10	✓ 1	" 8×12×5 fir	Bridge # 46		
" 10	✓ 1	" 8×8×12 fir	Bridge # 48		
" 10	✓ 2	" 8×8×14 fir	Bridge #39		
" 10	✓ 1	" 6×12×12 fir	Bridge #~~39~~ 44		
" 10	✓ 4	" 6×10×18 "	Bridge # 46		
" 10	✓ 4	" " 5 "	" "		
" 10	✓ 2	" 6×8×18 "	Bridge # 29		
" 10	✓ 8	" 6×8×18 "	Bridge # 31		
" 10	✓ 20	" 3×12×18 "	Bridge #50		
" 10	✓ 8	Doz 5/8" nuts Sq. nuts by mess.	Mechanic Scow Supplies		Req C 18
" 10	✓ 8	Doz ½" Sq. nuts " "	" " "		" "
" 10	✓	½" cut washers. 3# " "	" " "		" "
" 13	✓ 7	pcs. 3×12×16 Oak	Rdg. car 28508 at Birdsboro Frt. Station from Store House	Bdgs. 6+8 Mile Levels	Req C. 16
	✓ 56	pcs 3×10×16 "			
	✓ 19	" 3×8×16 "			
	✓ 31	" 3×7×16 "			
	✓ 16	" 3×10×14 "			
	✓ 10	" 3×7×14 "			

Material Received in September and October 1934

DATE	CARGO. No. of. CHARACTER OF.	CONSIGNMENT. TO WHOM. PORT OF	INSTRUCTIONS AT
Sept 13	✓ 2 pcs. 3 x 12 x 12 Oak	from Store House at Birdsboro on car Rdg # 28508 for Brges. Six and 8 Mile level	Req. C-16
	✓ 48 " 3 x 10 x 12 "		
	✓ 51 " 3 x 7 x 12 "		
	✓ 2 " 4 x 12 x 12 "		
	✓ 13 " 3 x 8½ x 20 fir		
	✓ 1 " 3 x 8½ x 16 "		
	✓ 4 " 3 x 6 x 16 "		
	✓ 4 " 2 x 4 x 16 Sap pine		
	✓ 2 Kegs 7" wire Spikes 200#		
	✓ 2 Kegs 60D " nails 200#		
	✓ 40D wire nails 5#		
	✓ 24 pcs. ½" x 12" Dock Spikes		
	✓ 1 Bbl. Kerosene	from Store House on car	Req. C-18
	✓ 14 Empty Oil Drums Sec. Hd.	from Store House on car	" "
	✓ 28 pcs 2 x 12 x 16 fir	" " " "	" "
	✓ 2 pcs 6 x 9 x 42 fir	" " " "	"
Sept. 24	✓ 1 Hand Hatchet	from Store House by mess for Dredge use	Req. C. 18
" "	✓ 2# tin roof nails	" " " " for Lock House # 43	not on Req.
" "	✓ 2# 10 D wire nails	" " " " " " " "	" "
" "	✓ 20# 6" cut Spikes	by tractor at Car Shop. for Bridge # 52	Req. C-15
" "	✓ 20# 7" " "	" " " " "	" "
" 27	✓ 2 Pad Locks Sec. Hd.	" mess. for Feeder House Lock # 58	Req. C 12
" 27	✓ 160 5/8 x 10" Dock Spikes 190#	by Freight at Gibraltar from Freight from Co Lebanon for Big Reading Dam, fasten Slope Sheeting	Req. C 18
" 24	✓ 50# 6" cut Spikes	from Store House at car Shop for Bridge # 6	Req. C 15
" 24	✓ 15# 7" " "	" " " " " " " " "	Req. C 15
" 24	✓ 10# 20D wire nails	" " " " " " " " "	Req. C 15
" 24	✓ 6 ¾" x 16" Dock Spikes	" " " " " for Big Reg. Dam	" C 18
" 28	✓ 1 6" Hasp	from Store House for Lock # 43	not on Req.
" 28	✓ 1 Pad Lock Sec. Hd.	" " " " "	" "
" 28	✓ 8 7/8" # 10 Flat Hd wood Screws	" " " " " "	" "
" 26	✓ Car of Egg coal	for Feeder House Lock # 68 and Lock House # 72	Req. C-19
Oct. 2	✓ car " Pea coal	" Dredge & Tug.	" C 19
" 6	✓ 2 Pcs. 4 x 12 x 16 fir	from Store House to Royersford Rdg. no. 21939	Req C. 15
	✓ 2 " 4½ x 6½ x 8 fir	" " " "	" "
	✓ 4 " 4 x 5½ x 16 Y. P.	" " " "	" "
	✓ 16 " 3 x 13½ x 36 fir	" " " "	" "
	✓ 6 " 2 x 6 x 16 "	" " " "	" "
	✓ 12 " 2 x 4 x 16 N. C. pine "	" " " "	" "

Material Received in October and november 1934

DATE.	No. of	CARGO. CHARACTER OF. / CONSIGNMENT. TO WHOM. PORT OF	INSTRUCTIONS AT
Oct 9	✓	4 corn Brooms, from Store House by mess. for Tug & Dredge	Req. # C-20
" 10	✓	1 pc. 8x10x24 Y. P. Sec. Hd. from car Shop on car Rdg. #29096, Big Rdg. D.	" #618
" "	✓	26 " 4x8x16 fir	
" "	✓	11 " " 10 "	
" "	✓	15 " " 6 "	
" 11	✓	1 Gal. Screw cutting Oil, from Store House for M.C. Scow	Req. # C. 20
" 15	✓	2 Bags Portland Cement, from Store House by Jct. at Hang. for Lock House #30	" # C. 20
" 18	✓	10 pcs. 3x10x20 fir, from Store, Hauled by Store House truck to Bdge #52	" # C-15
" 23	✓	10# cotton waste, from Store House, by mess. for Dredge & Tug	Req. C-21
" 23	✓	5 Gals. Steam Engine oil " " " "	" "
		Crosby Steam gage & valve co., 10 Roland St. Boston, mass.	
Nov. 5	✓	{2 Safety pops, from ~~[illegible]~~, for Dredge & Dolphin boilers, {2 - 2" Br. T.O. Pop. valve 100# Style HH-111, $9.77 each,	Req. C-20
Nov. 5	✓	4# 20D wire nails, from Store House, for Lock House #50, Order #922,	Req. C-22
" 5	✓	12# 8D wire nails, " " " " " " "	" "
" 5	✓	3 Doz. 1½" #10 wood Screws, " " " " " " "	" "
" 5	✓	2 pr. Ex. Hy. 8" Strap Hinges " " " " " "	" "
" 8	✓	1 Bag cement, from Store House " " " " "	" "
" 8	✓	300# Building Sand " " " " " "	" "
" 9	✓	75 ft. 3/4" Dia. wire cable, Sec. Hd. " for Dredge Backing cable	Req. C 23
" 12	✓	2# 10D wire nails, from Store House, Lock House #38, order #921	Req. C-21
" 12	✓	6# 20 " " " " " "	" "
" 12	✓	2# 8 " " " " " "	" "
" 13	✓	2 pcs. 4x8x16 fir from Store House, for Lock House #38, order #921	" C-21
" 13	✓	1 " 4x4x16 " " " " " "	" "
" 13	✓	50 ft. B.M. 1¼" Y. P. flooring " " " " " " "	" "
" 13	✓	1 pc. 1x12x16 #3 Barn pine " " " " " " "	" "
" 13	✓	1 " 2x12x16 fir " " " " " " "	" "
" 13	✓	2 " " 12 " " " " " " "	" "
" 13	✓	5 " 2x10x16 " " " " " " "	" "
" 13	✓	4 " 2x4x16 N.C. pine " " " " " "	" "
" 12	✓	1 4" Wall paint Brush " " for Lock House #51, order #923	Req. C-22
" 12	✓	5# Pinkers cement " " " "	"
" 12	✓	6 Gals. Roofing Paint Rdy. Mixed Ext. dinner " " " " " "	"
" 15	✓	2 Gals. Lead color paint from Store House, for Porch, Lock House #30	Req. C-23
" 17	✓	4 14" Hand Bastard files, from Store House, for M.C. Scow,	Req. C-18
" 17	✓	1 Gal. Lead color Paint, " " " " Lock House #38, order #921	" C-21
" 17	✓	1 Gal. " " " " " Lock " #50 " 922	" C 22

Material received in November, (nothing Reed. December) January, 1934 February 1935

DATE.	CARGO. No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	CONSIGNMENT. PORT OF	INSTRUCTIONS AT
Nov. 16 ✓	3	pcs. 1×8×16 #3 Barn pine,	from Store House,	Lock House #60, R.E. #922	Req. C-22
" 16 ✓	1	" 1×6×16 "	" " "	" " " "	"
" 16 ✓	1	" 1×3×16 "	" " "	" " " "	"
" 16 ✓	22	" 1×12×16 "	" " "	" " " "	"
" 16 ✓	10	" 1×6×14 W.P. flooring	" " "	" " " "	"
" 16 ✓	8	" 1×6×14 " fencing	" " "	" " " "	"
" 16 ✓	1	" 4×10×16 fir	" " "	" " " "	"
" 16 ✓	1	" 4×10×8 "	" " "	" " " "	"
" 16 ✓	1	" 4×4×12 "	" " "	" " " "	"
" 16 ✓	1	" 3×6×10 "	" " "	" " " "	"
" 16 ✓	3	" 2×8½×16.	" " "	" " " "	"
" 16 ✓	2	" 2×12×9 4.P.	" " "	" " " "	"
" 16 ✓	4	Rolls Ruberoid roofing	From McFarland	" " "	"
" 19 ✓	2#	tinners cement	from Store House	for Lock House #30	" C-23
" 20 ✓	2	corn Brooms,	from Store House,	For Mechanic Scow,	Req. C-24
" 22 ✓	1	gal. Brown car Paint,	from the Store House,	For fender float, Lock #68	Req. C-23
" 28 ✓	1	pc 6½" × 18" long Galv'd iron	Stove Pipe, from Store House,	for M.C. Scow	" C-24
" 28 ✓	1	" 6½" × 24" long Galv'd iron	complete with hood Stove pipe	" " " "	"
1935 Jan. 2	6	long Handle Rd. point Shovels	Sec. Hd., from Store House,	Cleaning Canal	Req. C-25
" 8	2	5408 Pruning Shears,	From Supplee-Biddle Hardware Co.	Phila. Pa.	" C-20
" 10	22	Lineal ft. 3/8 chain,	from Store Store	For Rug Dolphin	" C-28
" 12	2	bbls. Boat Pitch	from Phila.	by Freight	" C-28
" 15	3	one gal. cans of Ruberine Roof Coating,	from Ruberoid Co.	New York, for M.S.R.	" C-28
" 17	38'	Sec. Hd. ½" chain 90#	From Joco Shop.	by bag. for Dump Scows	Req. to Foll.
" 19	1	Ball torch Wick yarn 2#	from Store House	by Mess. for Dredge	Req. C-24
" 22	2	bales, Marine Oakum,	by Freight from Marine Manf. & Supply Co.	New York	" C-28
" 22	2#	White Putty, from Store House		Rug Dolphin	" C-28
" 23	2	Kegs 7" ~~cut~~ wire Spikes,	from Store House,	by Freight for Bridge #67	" C 26
	18	lbs, 8" wire "	" " "	" " " "	"
	7	" 8" cut "	" " "	" " " "	
Feb. 5 ✓	3	Handles for Spiking maul,	from Store House,	Mechanic Force	" C, 1
" ✓	1	Sec. Hd. Lg. Handle for Scoop Shovel,	from Store House	Dredge Use	" C, 1
" 6 ✓	8	Gals. Brown Car Paint,	from Store House,	by bag. Floating Equipments	Req. C-28
" 11 ✓	70	lbs. 6" cut Spikes,	from Store House	by Frt. " "	" 28
" 11 ✓	85	" 5" "	" " " "	" " " "	"

Material Received in February 1935

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Feb. 11	2 gals.	Yellow paint, from Store House, by Frt.	for Dredge & Rug		Req. C-28
" 11	3 "	Lead Color paint " "	" " " "	"	" 28
" 11	½ "	Black paint " "	" " " "	"	" "
" 11	1 Qt.	Tuscan Red paint " "	" " " "	"	" 4
" 11	1 pc. 6×12×12	Oak from Store House by Frt. P+R. 28521		Section Scow, Tug #60	" 27
"	1 " 6½×8½×10	"		Mechanic Scow	
	3 " 4×8×16	"		Timber Scow	
	2 " 4×5½×16'	"		Dump " 1926	
	6 " 3×12×8	"		Timber "	
	1 " 3×12×8	"		Mechanic "	
	5 " 3×12×8	"		Deck Scow #14	
	4 " 3×6×3	"		Section Scow, Tug #60	
	3 " 2×12×8	"		Deck Scow #14	
	3 " 2×10×8	"		Mechanic Scow	
	3 " 2×5×16	"		Deck Scow #14	
	12 " 3×12×16	for		Dump Scow 1926	
	2 " 3×8×36	"		" " "	
	2 " " 16	"		" " "	
	16 " 2×12×16	"		Timber Scow	
	6 " 2×12×24	"		" "	
	18 " 2×12×16	"		Deck Scow #14	
	10 " 2×12×16	"		" " 15	
	2 " 2×10×16	"		Section Scow #60	
	1 " 1×12×16	Barn pine		Dredge Small boat	
	1 " 8×12×19	Oak		Timber Scow	
	1 " 8¾×13×9'6"	" Oak		Mechanic Scow	
	1 " 8¾×13×9'6"	"		Deck Scow #14	
	1 " 8×8×7'	"	3'6"	Timber Scow	
			3'6"	Mechanic Scow	
	1 " 6×8×2'	"		Timber Scow	
	1 " 5×10×8'	"		Dump Scow 1926	
Feb. 18	4# 20D wire nails	from Store House, by Mess.	for R.E. Order #924, Tug	House #38	Req. C-1
" 21	4# 30z. 5/8" #150	Garlock packing from Store House		Dredge & Rug,	" C-2
" 23	2000# Bituminous Coal,	From S.L. Shanaman	Phoenix,	Grid Iron	" C-2
" 25	2-10" Great American Saw files	from Store House,		Dredge & Rug	" C-2
" 25	2-10" Mill Saw files	from Store House,		" "	" C-2

Material Received, in February, March and April 1935

DATE.	CARGO. No. of. / CHARACTER OF. / CONSIGNMENT. TO WHOM. / PORT OF	INSTRUCTIONS	AT
	Stauled by Leukert, Leesport, Pa.		
Feb. 20	✓ 3 pcs. 2x10x16 fir, from Store House by Frt. for Lock House #38, R.E.O.#924	Req.	C. 1
	✓ 1 " 2x12x16 " " " " " " " " "	"	1
	✓ 1 " 2x4x16 Y. Pine " " " " " " " "	"	C 1
Mar 2	✓ 1 Gal. Lead Color Paint, from Store House by mess. for Lock H. #38 Leesport R.E.O.#924	"	C 1
" 11	✓ 2 pcs. 6¼"x12½"x5'6" Oak, by Frt. from Store House for Dredge	Req.	C. 27
note—	Mar. 16. took back to Store House 4# 3 oz. of 5/8" #150 Garlock packing (was Recd 2/18/35) Exchanged it for ½" #150 Garlock packing and Recd. 5# ½" packing.		
Note—	Mar. 2nd (Feb.) Were Recd. at lumber yard Rdg. for Bridge #67 But were instructed to hold them, till advised to ship them. 5 pcs 3x8x18 Oak 180'; 21 " 3x10x18 " 945'; 10 " 3x12x18 540' } was turned over to the Lumber yard July 1935.		
Memo.	3/5/35 took 2 spud Lock Box Bands to Loco Shop to get angles welded. " 3/9/35 Recd. " " " " from " they were welded at angles. Reported this on March Recd. report.		
April 4	✓ 4 Sheets #2 emery cloth, from Store House for Dredge and Tug.	Req.	C-3
" 4	✓ 1 Doz. 1# cans Caustic Soda " " " " "	"	"
" 5	✓ 3 Corn brooms, from Store House, 2 for Dredge 1 for Tug	"	"
" 8	✓ 400 ft. 1" dia. Manila line 95# from Store floating Equipments Supplies	"	"
" 8	✓ 300 " ¾" " " 55# " " " "	"	"
" 8	✓ 300 " ½" " " 23# " " " "	"	"
" 12	✓ 15 Gals. Kerosene from store house for Dredge and Tug ✓ 1 Steel ~~Drum~~ Barrel #757 note Return to Store House April 19th 1935	Req.	C-3
	✓ 8 Gals Steam Cylinder Oil from Store House "	"	"
	✓ 8 " " Engine " " " " " "	"	"
	✓ 10 " Black Oil " " " " "	"	"
	✓ 20# Tallow " " " " " "	"	"
	✓ 20# Cotton Waste " " " " "	"	"
	✓ 50# (1# pcs) ~~cans~~ Boiler compound Henry Boyer Chemical Co. Gray Ferry Rd. & 29th St. Philada. Pa.	"	"
	✓ 1 bbl. Boat Pitch, from Dunlap, Mellor & Co. Philada. Pa.	"	"
Apr 13	✓ 1 bale (50#) Oakum from the Marine Mnfg. & Supply Co. 228 & 230 Greenwich St. New York NY.	"	"
April 22	✓ 2 Dusting brushes, from G.S.H. by mess. for Mechanic Score	Req.	C-5
" 22	✓ 1 corn Broom " " " " Reeder House Lock #68	"	"
" 22	✓ 1 Garden Rake " " " " " " "	"	"
" 22	✓ 1 Gal Lead color Paint, from Genl. S.H. " Dredge and Tug	"	C-4
" 24	✓ 10# (~~Rinker~~) Roofing cement, from Genl. S.H. House Lock #68	"	C 5
" 24	✓ 7 Doz. 5/8" Sq. Nuts Lock Gates	"	C 5
" 25	✓ 125# 40 D wire nails, from G.S.H. by baggage for Lock Gates 62 & 66	"	C. 4
" 29	✓ 8 pcs. ½"x6"x4'6" Flat Iron Sec. Hd. 367# from Store House by Frt. for Locks nos 62 & 66	"	C 4

Material Recd, April, May, 1935

DATE.	No. of.	CARGO. CHARACTER OF. / CONSIGNMENT. TO WHOM. PORT OF	INSTRUCTIONS AT
April 29	✓ 8	pcs. ½"×4"×4'6" flat Iron Sec. Hd. 245# from Store House, by Freight, for Locks no 62 & 66	Reg. C 4
" 29	✓ 33	pcs 2×12×16 fir 1056' from G. S. H. by Frt. Dam Strips Beat Rock Dam	" C 4
April 30	✓ 1	Bar ⅜" Rd. Iron 7# from G. S. H. by Frt. to Plx, for Lock Gates, Locks #62 & 66,	Reg. C 5
"	✓ 3	" ½" " " 36# " " " " " " " " "	"
"	✓ 6	" ⅝" " " 112# " " " " " " " " "	"
"	✓ 1	" ½" Sq. " 14# " " " " " " " " "	"
May, 2	✓	62.10 tons Pea Coal, For Dredge & Tug, charge Dredging,	Reg. C-5,
" 13	✓ 2	12 Qts. Galv. iron buckets, From S. H. by baggage Dredge	" C 6
" 14	✓ 1	Gal. linseed oil, from G. S. H. by mess charge Dredge Tug & Scows	" "
" 16	✓ 4	pcs. 12×16×13 fir S.4S. 832' Frt. Car Rdg. 20210, Eastern Pen. Lbr. Co. Lock #62	Reg. C 4
	✓ 4	Pcs. 12×14×10 " " 560' " " " " " "	"
	✓ 2	" 10×14×10 " " 233' " " " " " "	"
	✓ 2	" 10×12×10 " " 200' " " " " " "	"
	✓ 1	" 12×12×27 " " 324' " " " " " "	"
	✓ 4	" 12×16×8 " " 512' " " " " " Lock #66	"
	✓ 4	" 12×14×14 " " 784' " " " " " "	"
17	✓ 1	Gal, Brown Car Paint, from G.S.H. by Mess, for Mc. & Repair Scows	Reg. C. 6.
18	✓ ½	(all Sec. Hd.) Doz. cups from S. H. by mess, for Mechanic Scow force,	"
	✓ ½	Doz Saucers " " " " " " "	"
	✓ ½	" Plates, " " " " " "	"
	✓ ½	" Table Spoons " " " " " "	"
	✓ ½	" Tea " " " " " "	"
	✓ ½	" Knives " " " " " "	"
	✓ ½	" Forks " " " " " "	"
21	✓ 1	Pc. 6×10×16 80' Oak, from Reichley Bros. St. Clair Pa. for Lock #66	" C 4.
21	✓ 1	" 8×10×13' " " By Frt. on Rdg Car # 27595 " " " 62	" "
22	✓ 1	Gal, Brown car paint, from G. S. H. by Mess, for mechanic & Repair Scows	" C 6
	✓ 2	pcs. maple cogs for bevel mortise gear, #492 from Morgan Smith Co. York. Pa for Lock #68,	Reg. C-5
31	✓ 7	Pcs 2"×12"×16' fir 224' from G.S.H. by Frt. on Rdg. Car # 4547 for Lock #62	Reg. C 4
"	✓ 4	" 2½"×9"×11' Oak 83' " " " " "	"
"	✓ 4	" 2½"×6"×6' " 30' " " " " "	"
"	✓ 4	" 3"×3"×8' " 24' " " " " "	"
"	✓ 2	" 3"×4"×8' " 16' " " " " "	"
31	✓ 7	Pcs. 2"×12"×16' Fir 224' " " " " for Lock #66	"
"	✓ 4	" 2½"×9"×8' Oak 60' " " " " "	"
"	✓ 4	" 2½"×6"×6' " 30' " " " " "	"
May In Stock at Old car Shop	4	Cast Iron Wicket Blocks, Sec. Hd. 709# Each from Lock #43' Put in Stock Rdg.	C. S.
	4	" " " " 709# " " " #45 " "	"
	2	" " " " 709# " " " #46 " "	"
	1	Cast Iron Sluice Gate Frame " " 363# " " " #46 " "	"

Material Received in June, and July 1935

DATE.	No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
June 35, 4	✓ 1 Roll	1" wide, 10 yds, Bauer & Black adhesive Plaster from G.S.H. by Mess for Dredge			Req. C-7
4	✓ 1 "	2" wide 10 yds " " Gauze Bandage " " " " "			"
" 19	✓ 1 Pc.	white Oilcloth 50"×78" from Strawbridge and Clothier Philada. Pa for M.C.S crew			Req. C-5
note, May 31,	✓ 2 Pcs.	3"×10"×12' Oak, 60' from G.S.H. by Rdg. on car # 27594, Rdg. for Lock #61,			" C-5,
July 1	✓ 1 Roll	1" wide 10 yds, adhesive tape from Bauer & White 10 yds. for M.C. Sand force			Req. C-8
"	✓ 1	" 2" wide - (10 yds) " " 10 yds. " "			" "
" 5	✓ 1	Cast iron hoisting clutch 25#, made at Rdg. Shops, for Dredge,			Req. C-7
" 5	✓ 1	Cast iron backing clutch 25# " " " " "			" "
" 1	✓ 3 Pcs.	6"×12½"×5½" fir 103'	from Store House, for Bridge #29		Req. C-8
	✓ 1	" 6"×12½"×12' " 75'		" 29	
	✓ 1	" 6"×8"×4' " 16'		Bridge #41,	
	✓ 1	" 3½×8½×6' " 15'		Bridge #49,	
	✓ 2	" 8"×16"×5' " 107'		" 41	
	✓ 6	" 5½×8"×5½ Sec. Hd Treated 121 ft		" 41	
	✓ 1	" 4½"×8½"×8' " Fir, " 26'		" 49	
	✓ 2	" 4"×10"×14' Fir Sec. Hd, 93'		" 29	
	✓ 6	" " 18' " " " 360'		" 41	
	✓ 2	" 10"×10"×15' " " " 250'		" 41	
	✓ 3	" 5½"×12½"×30' Y.P. " " 519'		" 41	
	✓ 1	" 3"×7"×8' " " " 14'		" 49	
	✓ 1	" 7"×9"×13' " " " 68'		" 41	
	✓ 1	" 4"×10"×13' " " " 43'		" 49	
	✓ 1	" 6"×8"×17' " " " 68'		" 41	
	✓ 1	" 12"×12"×15' " " " 180'		" 41	
	✓ 1	" 12"×16"×24' " " " 384'		" 41	
July 8	✓ 1	3/8" Brace bit 19" long, from Store House	Inspecting timber		Req. C-9
" 11	✓ 1	bottle camphor cream Liniment, from Shoemaker & Busch Inc. 515 Arch St. Philada		For Dredge crew	Req. C-7
" 11	✓ 1	Pc. Galvd. iron Stove pipe, 8" Dia, ×24" long Sec. Hd. from G.S.H., for Lock #68			Req. C-7
" 11	✓ 1 Pc	" " " 8" Dia, 24" long complete with Stove top " "			" "
" 30	✓ 1 pc.	Ref. sole leather 12×36" 5# from G.S.H. Pump repairs Floating Equipment Pumps			Req. C-9,

Rec'd on Rdg. Car # 6548, hauled by Schappel, 3½ hrs @ 1.50 $5.25

Material Received in August, September, ~~& October~~ 1935,

DATE.	No. of	CARGO. CHARACTER OF. / CONSIGNMENT. TO WHOM. PORT OF	INSTRUCTIONS AT
August 5	✓	2 corn brooms, by mess. from G.S.H. for Feeder House Lock #68,	Req. C-10
6	✓	10 pcs. 3x8x16, Y.P. 320' from Lbr. Yd. Rdg. by G.S.H. Truck, Haws acq.	Rec. C-11
"	✓	16 pcs 2x12x16 fir 512' " " " " " " "	" "
"	✓	7 " 3x12x16 " 336' " " " " " " " "	" "
7	✓	3 pc. 10x12x7' Sec Hd. Y.P. 210' " " " " "	" "
7	✓	30 pcs. 3x8x16 Y.P. 960' " " " " " "	" "
Aug. 6	✓	1/2 Keg 60 D wire nails 50# G.S.H. by " " "	" "
" 6	✓	1/2 " 40 " " 50# " " " "	" "
" 6	✓	10 pcs. 1/2" Sq. x 16" Dock Spikes " " " "	" "
" 20	✓	5 Gals. Steam Engine Oil, from G.S.H. charge to Dredging Phoenix & Philada	" C-12
" 20	✓	1 corn Broom, from G.S.H. " Req,	" "
" 20	✓	12 Oil Drums, 2nd Hd. " by Brit. oil car Rdg. #18358 " Float Lock #68	" C-10
" 20	✓	1 bbl. Kerosene 50 Gal. " Feeder House Lock #68	" "
" 20	Ret.	1 Steel barrel #770, by Returned to Store House Aug 20th 1935,	
" 20	✓	5 Gals. black Oil from G.S.H. Feeder House Lock #68.	Req. C-10.
" 20	✓	6 pcs. fir 4x4x16, 128' from Lbr. Yd. channel buoys, Harmonist & Spring Mill Dams,	Req C-9.
" 20	✓	1 " " 6x9x42', 189' " " Float Lock #68	Req C-10.
" 20	✓	4 " " 2x12"x16', 128' " " " " " "	" "
" 20	✓	2 " " 3x12x16, 96' " " " " " "	" "
" 20	✓	4 " " 4 1/2x5x16 53' " " " " " "	" "
" 20	✓	1 pc. Oak 3x12x16 48' " " " " "	" "
" 20	✓	33 pcs. 2x12x16 fir 1056 " " " Flash boards Flat Rock Dam	" "
" 20	✓	4 pcs 6x9x18 " 324 " " " Lock props, Lock #69 & 70,	" "
" 20	✓	2 Gals. ~~car~~ brown car paint, Genl. S.H. Float Lock #68	" "
" 29,	✓	150' 3/4" Dia. manila Line, 25# from G.S.H. by mess. for Lock #68,	Req C-10
Sept. 4,	✓	3 Sec Hd. Heavy Pad Locks from Store House, for Lock #67,	Req. C-7,
" 21	✓	2 5408 Pruning Shears, from Supplee-Biddle Hardware Co. Philada Pa. $3.15 charge 1 to Vincent Canal, 1 to Hamburg canal.	Req. C-13.
" 25		2 corn Brooms, from G.S.H. for Dredge use	Req. C-14
" 26	✓	15# Tallow, from G.S.H. charge to Lock Repairs	" "
" 26	✓	1 Gal. Screw cutting Oil from Genl. S.H. charge repairs to Lock	" "
" 26	✓	1 Gal Black Oil, from G.S.H. " " "	" "
" 24	✓	1 Grass scythe, Sec. Hd. from G.S.H. by mess. charge to River Mill canal	Req. C-16
" 24	✓	1 Snathe " " " " " " "	" "

Material received in October, November, 1935,

DATE.		CARGO. No. of. CHARACTER OF.	CONSIGNMENT. TO WHOM. PORT OF	INSTRUCTIONS AT
Oct. 1	✓	1 Gal. White paint, from G.S.H., by mess.	charge to buoys Red Rock & Fairmount Dam	Reg. C 14
" 1	✓	10 lbs (tinkers) Roof cement, "	" to Lock House # 33	" "
" 1	✓	1 Car Furnace coal	charge to Feeder House Lock #68 & Lock House #72	" "
" 8	✓	½ Doz. 12" Stack Saw blades, from G.S.H. by mess.	charge to Line repairs	" "
" 14	✓	1 Car anthracite Pea Coal	charge to Dredging, Tug & Dredge	" "
" 17	✓	2 Rolls Ruberoid Roofing, from G.S.H. by Frt.,	charge to tool & coal Shed Lock #66	Reg. C 15
" 17	✓	3 pcs. 3"x4"x16' N.C. pine, 48' " " "	" " "	"
" 17	✓	25 pcs 1"x12"x16' #1 Y.P. 400' " " "	" " "	"
" 17	✓	5 Gals. Brown car paint " " "	charge to Roof. Lock # 68.	Reg. C 14
" 24	✓	1 Grass Scythe, Sec. Hd. from G.S.H.	charge to Five Mile Level	Reg. C 16
" 24	✓	1 Snathe " " " "	" " " "	" "
" 23	✓	10# 10D wire nails, " "	Order R.E. 13-490 Lock #56	" "
" 23	✓	4# 8D " " " "	" " "	" "
" 30	✓	1 Pc. 4x4x6 fir 8' by Frt. "	" "	" "
" 30	✓	66' B.M. 1¼" flooring T&G. "7' long", by Frt. "	" "	" "
" 30	✓	1 pc. 1x10x16 Basic pine 13' " " "	" "	" "
" 29	✓	1 front brick rest for Othello # 327 B range, from Reading Stove works, Weight Baggage	charge to Dredge,	Reg. C 8
" 30	✓	½ Keg 10D Wire nails from G.S.H. by Frt.	Repairs Lock Houses 60 to 72	Reg. C 16
" 30	✓	½ " 8D " Baggage,	" "	" "
" 28	✓	2 Bundl. 5/8" Sq. Hd. Rd. Iron Scrap 54# " " "	" to Locks "	" "
Nov. 1	✓	50 ft. Sash cord, from G.S.H., By Mess.	charge to Feeder House Lock # 68,	Reg. C-16
" 2	✓	1 Gal. Linseed Oil " " "	" Lock Houses 60 to 72	" "
" 1	✓	2 Doz. 5/8" Square nuts " " "	" Repairs Locks 60 to 72	" "
" 2	✓	2 Gals. Steam Engine Oil " " "	" Dredge,	" C-17
" 4	✓	2 Oxford Lamp Chimneys (2½" Dia.) from G.S.H. "	" "	" "
" 4	✓	4# white Putty " " "	" Repairs Lock Houses 60 to 72	" C-16
" 6	✓	½ Gal. Lead color paint, " " "	" Lock House #56, R.E. Dept order # 13-490,	" C 16
" 21	✓	2 Gals. Black Oil, from G.S.H. By Mess.	charge to Dredge	Reg. C 19
" 21	✓	10# cotton waste " " " "	" " "	" "
" 26	✓	15# Lump Sulphur " " " "	Lock repairs Line	" C 14
" 29	✓	5# 10D cut nails " " By Baggage	" " Lock # 63 P.F. Kennedy.	" C 19
" 29	✓	1 Keg 60D wire nails " " " "	charge to Bridges # 62 & 65	" C 18
" 29	✓	1 # 153 Night Latch Lock " " Mess	" to Lock No. 69-70 Myk.	" C 16

58
21
240
17

Material received in December, 1935

DATE.		CARGO. No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	CONSIGNMENT. PORT OF	INSTRUCTIONS AT
Dec. 2	✓	1	bag of portland cement From G. S. H. by Frt. 50 Cts,		Lock no 63 Well Walls	Reg. C-19
" 2	✓	2½	Kegs, 60 D wire nails from G. S. H. by baggage,	for Bridges	Six + Eight mile Levels	" C 18
Dec. 7	✓	3	Gals. Brown car Paint, by Frt. From G. S. H.		" House #63, Roof.	" C-19
Dec 16	✓	3	pcs. 3 x 8 x 16 fir 96' from Lbr. yd. Rdg. by Frt.	charge	To Lock #63 Well floor	" C 19
" 16	✓	1	pc. 1" x 8" x 16' Barn pine 11' " "	" " "	" " " "	" "
" 16	✓	56'	B'M 1¼" flooring " " "	" " "	" " " "	" "
" 17	✓	1	pc. 6" x 8" x 12' fir 48' from Lbr. + Millwork co. York + Butler St. Philada.		by Frt on L. V # 5916 Bdge # 50	Reg. C 18
" 17	✓	8	" 6" x 8' x 11' " 352'		" 49	" "
" 17	✓	8	" " 20' " 640'		" 49	" "
" 17	✓	8	" 4" x 8" x 20' " 417'		" 47	" "
" 17	✓	1	" 4 x 8 x ~~23'~~ 20 " ~~54'~~ 54		" 44	" "
" 17	✓	3	" 4" x 8" x ~~21'~~ 22 " ~~168'~~ 176		" 44	" "
" 17	✓	2	" 4" x 8" x ~~22~~ 22 ~~117'~~ 118		" 43 ~~48~~	" "
" 17	✓	8	" 6" x 8" x 11' 352'		" 43	" "
" 17	✓	1	" 10" x 12" x 16' " 160'		" 37	" "
" 17	✓	1	" 6" x 8" x 10' " 40'		" 30	" "
" 17	✓	1	" 10 x 12 x 20 " 200'		" 26	" "
" 17	✓	5 ~~6~~	" 4" x 8' x 20' " ~~320'~~ ~~[illegible]'~~ ~~320'~~ 267.		" 26	" "
" 17	✓	10 ~~7~~	" 4" x 8" x 18' ~~432'~~ ~~448'~~ 480'		" 26	" "
" 18	✓	1	pc. 6" x 10" x 12' fir 60' from Lbr. + Millwork co, York + Butler St, Philada, Pa by Frt. on Lehigh Valley box car # 5916		Bdge # 62	Reg. C-18
" 18	✓	7	" 6" x 8" x 10' " 280'		" "	"
" 18	✓	8	" 6" x 8" x 20' " 640'		" 65	"
" 18	✓	8	" 6 x 8 x 12 " 38~~4~~'		" 65	"
" 23	✓	3	pcs. 3" x 12" x 18' Oak, 162' B.M. from Geo. S. H. on Rdg. car # 6641,		Six mile Level for Bdge. # 50	Reg. C 18
" 23	✓	3	" 3" x 8" x 18 " 96 "		"	"
23	✓	9	" 3 x 10" x 18' " 405 "		"	"
23	✓	1	" 4" x 9" x 16 fir 48 "			
23	✓	40	" 3" x 10" x 12 " 1200 "		" 49	"
" 23	✓	14	" 3" x 10" x 12' " 420. "		" 48	"
" 23	✓	8	" 4" x (8) 9" x 16 " (~~341'~~) 384 "		" 47	"
" 23	✓	14	" 3" x 10" x 12' 420. "		" 47	"
" 23	✓	20	" 3" x 10" x 12 " 600 "		" 43	"
" 23	✓	4	" 3" x 8" x 16 Y.P. 128 "		" 41	"
" 23	✓	1	" 3" x 10" x 16' fir 40' "		" 41	"
" 23	✓	3	" 3" x 12" x 12' Oak, 108' "		Eight mile Level, " 32	"
" 23	✓	2	" 6" x 12½" x 12½' fir 156' "		" 31	"
" 23	✓	~~35~~ 25	" 3" x 12" x 16' Oak. 1200'	B.M.	" 30	"
" 23	✓	14.	" 3" x 10" x 12' fir 420'	"	" 29.	"

Material Received in December, January, 1935, 1936

DATE.		CARGO. No. of. / CHARACTER OF. / CONSIGNMENT. TO WHOM. / PORT OF	INSTRUCTIONS AT
Dec 23	✓	1 pc. 3"x10"x12' fir 30' B.M. from G.S.H. on Rdg. Car #6641 Bridge #27	Req. C-18,
" 23	✓	1 " 6"x9"x6' " 27' " " 26	" "
" 23	✓	14 " 3"x10"x12' " 420' " " 26	" "
" 23	✓	4 " 4x4x8' Oak 43 " car Standers " 26	not on Req.
" 23	✓	12 " 3"x12"x12' Oak, 432' " from G.S.H. by Local Freight; Hamburg canal " 65	" "
" 23	✓	17 " 3"x12"x12' " 612' " " 62	" "
" 23	✓	10 " 3"x12"x12' " 360 " Shoemakersville Level Bridge no. 62	" "
1936 Jan. 2	✓	½ Doz. 7/8" Hexagon nuts, 1½# from Geil, S.H. by mess. charge to Tug,	Req. C-20
" 3	✓	2 pc 4½" Dia iron Stove pipe elbows, Sec. Hd. from G.S.H. by Mess charge Tug	" "
" 3	✓	1 " 4½" " ~~Galv~~ iron new " " " " " " " McScow	" "
" 3	✓	1 " 5" " iron " " " Sec. Hd. " " " " Shoudy Oaks Canal	" "
" 3	✓	2 corn Broomes, from G.S.H. by Mess. charge to McScow	" "
" 3	✓	1 pc. 12"x36"x1/16" Sheet Garlic Packing #900 new, ~~asbestos~~ 1¾# " " " " Bridge & Tug,	" "
" 3	✓	3-25 Watt 32 Volt Electric Light bulbs, from Geil, S.H. by Mess. water power Lock #68,	" Feeder House,
" 10	✓	~~1 pc~~ 1 Length 4½" Dia. B.I. iron Stove, from G.S.H. by mess. charge to Mechanic Scow,	Req. C-20
" 10	✓	4 Length " " " " " " " " charge to Tugboat	" C-20
" 10	✓	2 " " " " " " " " Five Mile Level.	" "
" 11	✓	3-25 Watt 32 Volt Electric Light bulbs, from G.S.H. by Mess, Water Power Feeder House L. 68	" "
" 11	✓	8D wire nails 13# from G.S.H. by mess Floating equipments	Req. C-2
" 11	✓	8D clinch " 3# " " " "	" "
" 11	✓	10D wire " 5# " " " "	" "
" 11	✓	40D " " 50# " " " "	" "
" ~~12~~ 27	✓	8 pcs. ¾"x5¼" Cone Head rivets, 6# from G.S.H. by Mess, Tugboat.	Req. C-21
" 28	✓	½ Keg. 7" Wire Spikes 50# from G.S.H. by Baggage, charge to Bdges. 62-64 & 65 Hamb.	Req. C-18,
" 29	✓	60D wire nails 85# " " " " " " Floating Equipments,	" C-3
" 29	✓	7" Wire Spikes 20# " " " " " "	" "
" 29	✓	1 pc. 1½"x3" nipple, " " by mess. " " Tugboat repairs	Req. C-6
" 29	✓	1 " 1½" Rd. way Stop Cock " " " " " " "	" "
" 29	✓	2 bales, Best Spun Oakum, by Freight from Alfred L. Moch, Inc. 36 South St. New York charge to Floating Equipments,	Req. C-3
" 30	✓	2 Kegs 7" Wire Spikes from G.S.H. by Frt. charge to Bdges 6 & 8 Mile Levels	" C-18
" 17	✓	8 pcs. 15/16"x6" Long Boiler Stay bolts from Loco Shop by Mess, for Tugboat Boiler	Req. C-6
" 17	✓	1 " 15/16"x10" " " Crown " " " " "	" "
" 17	✓	14 " 15/16"x15" " " " " " " "	" "
" 17	✓	1 " 1"x10" " " " " " " "	" "
" 17	✓	2 " 1 1/16"x6" Stay " Stay " " " " "	" "

Material Received in January 1936

DATE.		CARGO. No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	CONSIGNMENT. PORT OF	INSTRUCTIONS AT
Jan. 17	✓	1	1 1/16" x 10" Long Boiler Stay bolts,	from Loco Shop by mess.	Tugboat boiler	Req. C-6
" 22	✓	1	15/16" x 15" " " crown "	" " " "	" " " "	" "
" 22	✓	1	1 1/16" x 6" " " Stay "	" " " "	" " " "	" "
Feb. 3	✓	3	Stackmatack Knee, By Frt. P.R.R. from The Haskins Co. Baltimore Md. Dredge 8" wide x 2'8" High x 4'6" Long. 802 Hearst Power Building			Req. C-3
" 3	✓	2	Gals. Ruberine roof coating By Frt. from The Ruberoid co. 500 Fifth ave New York		mc. scow.	" "
" 3	✓	1	Gal. Genuine Ruberoid Plastic cement 10#	" "	" "	" "
" 3	✓	2 bars	1/2" Rd. Iron, 24# from G. S. H. by Frt. on Bag # 14867		Floating Equipment	" "
" 3	✓	1	" 3/8" " " 6# "	" "	"	" " "
" 3	✓	1-	1/8" x 14" x 6'9" Long, Sheet Iron Boiler Stack from Loco Shop by Frt.		Dredge	Req C-6
" 3	✓	1-	2 1/2" Dia. Steel spud Drum Shaft 7'10" Long	" "	" " "	" "
" 3	✓	208	7/8" Short Links chain new 156#	" "	" " "	" "
" 3	✓	104	" " " " Sec. Wt. 78#	" "	" " "	" "
" 3	✓	1 pc.	Brass Stern bearing bushing	" "	" " Tugboat	" "
" 3	✓	1 "	cast Iron boiler grade 250#	" "	" " "	" "
" 3	✓	1 "	3 1/2" Dia. Steel propeller Shaft 10'7" Long.	" "	" " "	" "
" 3	✓	1 "	2 7/8" " Steel upright swinging Shaft 6'1/4" Long 108#	" "	" Dredge	
" 3	✓	1	# 4 3/10 Sellers Injector	" "	" " Tugboat	
" 3	✓	1	#7 1/2 " "	" "	" " "	
" 3	✓	4	Cross Head pins	" "	" " Dredge	Slip order #6
			Rec'd, 2/6/36 at Plowenipille on Reading Car # 12709			
Ret. 6	✓	2 pcs.	1" x 14" x 16' cypress, 37 B.M.	Shop Lbr. Yd.	Smallboat,	Req. C-2
	✓	2 "	1" x 4" x 16' W.P. 11' "	" "	" "	" "
	✓	5 "	1" x 12" x 16 " 80' "	" "	" "	" "
	✓	2 "	1" x 4" x 16" oak 11' "	" "	" "	" "
	✓	1 "	1" x 8" x 8' " 5' "	" "	" "	" "
	✓	1 "	1 1/2" x 10" x 8' " 10' "	" "	" "	" "
	✓	2 "	8" x 8" x 5' " 53' "	" "	Dredge	" C-1,
	✓	2 "	6" x 6" x 3'6" " 21' "	" "	" "	" "
	✓	4 "	" " 2'6" " 38' "	" "	" "	" "
	✓	1 "	5" x 8" x 4'6" " 15' "	" "	" "	" "
	✓	1 "	3" x 12" x 8' " 24' "	" "	" "	" "
	✓	1 "	2" x 12" x 8' " 16' "	" "	" "	" "
	✓	1 "	2" x 10" x 8' " 13' "	" "	" "	" "
	✓	5 "	2" x 12" x 24' Fir, 240' "	" "	" "	" C-2
	✓	1 "	1" x 12" x 16' Barnpine 16' "	" "	" "	" "

Material Received in February 1936

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Feb. 6 (0)	✓ 1 pc.	7"X8"X3'4" Oak 16' BM.	From Lbr. Yard,	Tugboat,	Reg. C-1
	✓ 1 "	4"X4"X8' " 11 "	" " "	"	" "
	✓ 1 "	2¼"X12"X4' " 9' "	" " "	"	" "
	✓ 1 "	2"X12"X4' " 8' "	" " "	"	" "
	✓ 1 "	2"X10"X12' " 20' "	" " "	"	" "
	✓ 6 "	3"X8"X7' " 84' "	" " "	Mechanic Scow	" "
	✓ 2 "	2½X6"X16' " 40' "	" " "	" "	" "
	✓ 1 "	" " 3'10" " 5' "	" " "	" "	" "
	✓ 1 "	4"X8"X16' Fir, 43' "	" " "	" "	" C-2
	✓ 8"	2"X12"X16' " 256' "	" " "	" "	" "
	✓ 1 "	1"X12"X16' Barn P. 16 "	" " "	" "	" "
	✓ 1 Roll	Ruberoid Roofing 108 Sq. Ft.	From G. S. H.	" "	" "
	✓ 4 "	2"X12"X16" Pine 128' "	" " "	Timber Scow	" C-1
	✓ 1 "	1"X12"X16' Barn Pine 16' "	" " "	" "	" C-2
	✓ 1 "	2"X12"X16' Oak 32' "	" " "	Dump Scow 1936	" C-1
	✓ 2"	4"X8"X16' Fir 85' "	" " "	" " "	" C-2
	✓ 5"	3"X12"X16' " 240' "	" " "	" " "	" "
	✓ 1 "	2"X12"X16' Oak, 32' "	" " "	Dump Scow 1937	" C-1
	✓ 4 "	3"X12"X16' Fir 192' "	" " "	" " "	" C-2
	✓ 1 "	1"X12"X16' Barn pine 16' "	" " "	" " "	" "
	✓ 1 "	8"X8"X3'6" Oak, 19' "	" " "	Deck Scow #15	" C-1
	✓ 1 "	2"X12"X16' " 32' "	" " "	" " "	" "
	✓ 1 "	2"X6"X16' " 16' "	" " "	" " "	" "
(H.M.R. sheet)	✓ 3 "	2"X12"X16' Fir 96 "	" " "	" " "	" C-2
	✓ 1 "	1"X12"X16' Barn pine, 16' "	" " "	" " "	" "
	✓ 3 "	2"X12"X16' Fir 96' "	" " "	Deck Scow #14	" "
	✓ 1 "	2"X12"X16' Oak, 32' "	" " "	" " "	" C-1
	✓ 1 "	2½"X9"X18' Oak, 34~~68~~' "	" " "	Lock no. 63	" C-19
	✓ ~~75'~~ - ⅞"	Steel Cable, ~~Sec. Hd.~~ 93#	G. S. H.	Dredge	" C-6
	✓ 1 pc.	1½" Diam, 12' long, R. & pipe,	"	"	" "
	✓ 1 Keg.	⅜X5" Boat Spikes, 100#, from	Janson Steel & Iron Co.	Columbia, Pa	Float, Equipt. " C-2
7	✓ 5#	White Putty, from G. S. H. by Mess,	charge to Floating Equipt.		" C-3
	✓ 2 pcs.	4"X8"X22' fir, S.4S. 117' From	Walton (Watson) Malone & Sons	$6.85, Dump Scow 1926	" C-2
			Laurel St. Wharves, Phila, Pa		
	✓ 2 pcs.	5"X10"X30' Y. P. S.4S. 250'	" " "	21.25, Dredge, Dipper Pole	" C-1
10	✓ 9 gals.	Brown Car Paint, From	G. S. H. by Freight	Charge to Floating Equip.	" C-3
	✓ 4 "	Lead color " " "	" " "	" Tugboat	" "

Material Received in February, March, 1936,

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Feb. 10	✓	2 bars 3/8" Round Iron 15# from Loco Shop, by Mess.		Floating Equipments Reps.	Req. C-7,
" 11	✓	1 ton Bituminous Blacksmith Coal, From S.L. Shanaman,		charge to Bridges	Req. C-5,
" 12	✓	1/3 Doz. Spiking maul Handles, by Mess, from G.S. House		Phoenixville, Pa, (Locks + Floating Eq. Reps. Bridge repairs	" "
" 12	✓	2 " 3/8 Square nuts 7/8#	" " "	Floating Equipment reps.	" C 7
" 12	✓	2 " 1/4" " " 1/4#	" " "	" " "	" "
" 12	✓	1/2 " 12" Hacksaw Blades	" " "	" " "	" "
" 12	✓	1/3 " Hand Hammer Handles 18"	" " "	" " "	" "
" 12	✓	1/2 " 10" Great American Saw files	" " "	" " "	" "
" 17	✓	2 bbls Pine Tree (Boat) Pitch by Freight From	Geil. Naval Store Co.	230 Park ave. New York. Floating Equipments	Req. C-3,
" 19	✓	1/3 Doz. Pick Handles From G.S.H.,		Beds + Banks repairs	Req. C-6
" 20	✓	9 pcs. 2"X12"X16' Fir 288' B.M. by Frt, from G.S.H.		Flat Rock Dam,	Req. C-4
" 25	✓	5/8" X 1" Flat iron 12# from G.S.H.	by mess	Dredge	Req C-8
" 25	✓	1/4" Rd iron Sec Hd 5 1/2# "	" "	Floating Equipment repairs,	Req. C-7
March 2	✓	1 - 1 1/4" Armstrong Pipe Die, Sec Hd. from G.S.H.	by mess,	Dredge Use	Req. C-8
" 2	✓	1 - 5/8" solid machine bolt Die, Sec Hd.	" "	Mechanic Scow Use	" "
" 2	✓	1 " 3/4"	" "	" "	" "
" 2	✓	12" Swinging chain Posts 6# Sample, from Loco Shop.	by mess.	Dredge	Req C-6
" 9th		1 pc. 3"X12"X8' Oak from Lbr. Yd. Rdg.	by Freight	Dipper pole,	
Had Rec'd the 2 pcs Feb. 6 were to Small in Size and Returned them, Send back Feb. 11 1936 Were on Req. C-1					
" 9		1 " 2"X 12"X 8' "	" "	" "	" "
" 25	✓	8 mops to Pitch Boats Pat. Claim from G.S.H.	by Mess	Floating Equipments,	Req. C-9
" 27	✓	3 corn Brooms from Geil. Store House	by Mess	Dredge Supplies	"
" 27	✓	2 cedar Water Buckets from G.S.H.	by mess.	" "	"
" 27	✓	1 Potato masher Sec Hd	" " "	" "	"
" 27	✓	2 Orford Lamp chimneys 2 1/2" Diam from G.S.H.	by Mess.	" "	"
" 30	✓	1 pc. Sheet steel 1/4 X 9 3/4" X 9ft long from Loco S.	by Pat.	new Dipper Pole	Req C-9
" 30	✓	70' Rd. Iron 1/2" rerolled	" " "	" " "	"
" 31	✓	1 Doz. 1 lb. cans Caustic Soda From G.S.H.	by Mess	Dredge Supplies	"
" 31	✓	~~4 lbs 3/4~~ 3/4 ~~oz~~ # 3/4 lbs. Kearsarge Rod packing # S. 166	From G.S.H.	by Mess Pug + Dredge	"
" 31	✓	1# 5 oz. 1/4" Water Pump packing	From G.S.H.	by Mess Dredge	"
" 31	✓	1 Ball 1/2# asbestos packing	" " "	" + Pug	"
" 31	✓	4 Sheets #2 Emery cloth	" " "	" "	"
" 31	✓	6# asbestos Furnace cement	" "	"	"

Material Received in April 1936

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
April 4	✓	2 Long) Handles) for scoop shovels,	from G.S.H., by Mess,	Dredge + Pug Supplies	Reg. C-10
" 4	✓	4 Doz. ½ Square nuts #3 lbs.	" " " "	Floating Equipt's repairs	" "
" 4	✓	5 Gals Kerosene	" " " "	Mechanic Scow Supplies	" "
" 4	✓	1 bar Soft Solder 50-50 2 lbs	" " " "	" "	" "
" 6	✓	400 ft 1" Dia. manila rope 104 #	" " by Pat.	Dredge + Pugboat	" Reg C-9
" 6	✓	10 Gals. Black Oil	" " "	" "	" "
" 6	✓	10 " Steam Engine Oil	" " "	" "	" "
" 6	✓	10 " " Cylinder "	" " "	" "	" "
" 6	✓	15 " Kerosene	" " "	" "	" "
" 6	✓	1 Steel Barrel #1295 note - to be returned,	Returned April 16th 1936 Also		3 - 10 Gal cans 1 - 5 " "
" 6	✓	Tallow 10 #	" "	" "	" "
" 8	✓	3 dusting Brushes, from	G.S.H. by Mail	" "	"
" 8	✓	30 ft. 5/8" Dia. manila rope 4 #	" " "	for Dredge.	Reg C-10
" 8	✓	1 - ¼" (chuck) Drill S.S. for Labor	" "	" Mc. Scow Supply.	" "
" 11	✓	2 Vegetable dishes	from G.S.H. by Mess.	Dredge "	Reg C-9
" 11	✓	1 chopping ax with Handle	from G.S.H., by Mail	Bluff Mt Dam	Reg. C-10
" 16	✓	2 pcs. Oak 8"x12"x16' 256 B.M.	from Philip Lebzelter + Son Co Lancaster Pa. @ $50.00 Bill #16.75	1 Pc. for mc. Scow; 1 " " Deck " #15	Reg. C-1
" 16	✓	1 " " 2"x12"x22' 44' "		for Dredge	" C-1
" 16	✓	1 " " 2"x4"x22' 15' "		" "	" C-2
" 18	✓	1 Gal. Black Boiler Paint,	from G.S.H. by Mess,	for Dredge + Pugboat Boilers	" C-10
" 18	✓	1 " Yellow paint	" " " "	" "	"
" 20	✓	6 pcs. Oak Lbr. 2"x12"x6' 72' B.M.	from Lbr. Yd. Rdg. on Rdy Car no 6892	for Mont clare Culvert,	Reg. C-10
" 20	✓	30 " " " 2"x6"x6', 18' "	" " " "	" " "	"
" 20	✓	1 pc. Fir " 6'x10"x24', 120' "	" " "	Boat Yard Trunk	"
" 20	✓	1 " " " " 16', 80' "	" " "	" " "	"
" 20	✓	4 " " " 4x8x16', 171' "	" " "	" " "	"
" 20	✓	1 " " " 6x8x21', 84' "	" " "	Brouers Waste Weir,	"
" 20	✓	1 " " " " 16', 64' "	" " "	" " "	"
" 20	✓	4 " " " 6x9x5', 90' "	" " "	" " "	"
" 20	✓	18 " " " 2x12x16, 576' "	" " "	" " "	"
" 28	✓	12 " ½" x10" Wire Spikes	" " "	culverts Oaks Canal	"
" 28	✓	8" Wire Spikes 30 #	" " "	" " "	"

Material Received in May. June, July, August, 1936

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
May 7	✓ 2	14 Qts. Galvd. Deck buckets	from G.S.H. by Mess	Dredge	Req. C-9,
" 11	✓ 1 Car	Pea Coal on Rdg. Car # 81315		Dredge and Tugboat	" C 11
" 11	✓ 1	4" flat paint brush,	From G.S.H by Mess.	Dredge & Small boat	" C 11
" 20	✓ 2 Gals.	Brown car paint	from G.S.H. by mess,	Dredge & Small boat	" C 11
" 26	✓ 1 pc.	1½" pipe Union Galv.	from G.S.H. by mess	Tugboat	Req. C-12
" 26	✓ 1 "	corn Broom	" " " "	"	" "
" 26	✓ ½"	cut washers 4#	" " " "	Lock repairs	" "
" 26	✓ 100 ft.	¾" Diam. rope	" " " "	Lock no. 66, coal bucket,	" "
" 27	✓ 2 pcs.	Rattan brooms Stickoret Fibre brooms,	" " " "	Dredge	" "
" 29	✓ 32 bags	Portland Cement	" " by Freight	Norristown Waste weir,	" "
June 2	✓ 1 Car, 39,20 tons	one mass Stones	from the John T. Dyer Quarry Co. on Rdg. car no, 29163 Brt. Bill # 4404, Price of Stone .90 per ton 35.28		
" 4	✓ 6 pcs.	3x12x16 fir 288 B.M.	from Lock 4 dishop by Brt.	For Norristown Waste Weir, Norristown Waste Weir	Req. C-12 " "
" 12	✓ 4 C.Y.	Building Sand,	from Wayne Jct. on Rdg. Car 11019,	charge to Norristown W.W.	" "
" 13	✓ 1 - 12#	Sec. Hd, Sledge Hammer,	from G.S.H. by mess	for Dredge	Rec. C-13
" 15	✓ 4 Doz.	¾" Sq. nuts 12#	" " " "	Lock repairs	" "
" 15	✓ 1 Doz.	1⅛" " " 8#	" " " "	Dredge	" "
" 15	✓ 150 ft.	¾" diam. manila rope 24#	" " "	Mechanic Scow Supply	" "
" 15	✓ 140 "	1" " " "	37# " " "	" " "	" "
" 15	✓ 1 new	36" Hammer Sledge Handle,	" " "	Dredge	" "
July 21	✓ 2	Cast iron Hoisting clutches	50# from Loco Shop	Dredge	Req. C-15
" 29	✓ 76 ft.	lin. ⅝" Diam. Manila Rope,	10# from Genl. S.H. by Mess	Lock no 72	" C 14
" 29	✓ 10#	8D wire nails.	from G.S.H. by mess.	" House no 72	" C 14
Aug. 3	✓ 1 Gal.	Screw cutting Oil,	from Gen. S.H. by mess.	charge to Lock Repairs	Req. C-15
" 3	✓ 1 Gal.	Linseed Oil	" " " " "	" Lock House repairs	" "
" 4	✓ 1	12# Sledge Hammer, Double face	from G.S.H. by Mess	charge to Dredge	Req. C-13,
" 6	✓ 4 Gals	Brown Car Paint	From G.S.H. by Mess.	Roof Lock House 66	" C-18,
" 8	✓ 1	Sledge Hammer Handle	" " " "	charge to Dredge	Req. C-13,
" 10	✓ 36 ft.	lin. ⅝" Diam. Manila Rope	5¼# from G.S.H. by Mess	Lock no 72,	Req. C-14
" 10	✓ 150 ft.	lin. ½" Diam. manila rope	12# #½ # from G.S.H. by Mess	Lock no 68	Req. C-15,
" 25	✓ 10 gals	Red engine oil	from G.S.H. by Mess Car Rdg. 12257	Dredge & Tug	Req. C-16
" 25	✓ 5 Gals.	Black oil	" " " "	" "	" "
" 25	✓ 5 lbs.	Cotton Waste	" " " "	" "	" "
" 25	✓ 1 bbl.	Kerosene	" " " "	Water Power Feeder House	Req. C-15
" 25	✓ 5 Gals.	black oil	" " " "	" " " "	" "

Material Received in August & September, 1936.

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Aug. 17	✓	62 tons, 1 Car hard burning, Fresh mined Anthracite pea coal,	Dredge and Rig		Req. C-16
" 20	✓	1 pc. 12"x12"x30' Y.P. 360' B.M.	from Phila. by Truck,	Dredge	" C-16
" 25	✓	35 pcs, 2"x12"x16' fir, 1120' B.M.	from Rdg on Rdg. Box car No. 12257 at Venice Br. Via Pencoyd.	Float Rock Dam,	Req. C-14
"	✓	5 " 3"x12"x16' " 240' B.M.	" "	Lock No. 69-70	" "
"	✓	2 " 6"x9"x21' " 189 "	" "	" "	" "
	✓	2 " 1"x2"x12' ash 4' "	" "	Lock No 72	" "
	✓	2 " 6"x5"x4' fir 17' "	" "	" "	" "
	✓	2 " 2"x12"x16' " 64 "	" "	" "	" "
	✓	1 " 2"x6"x16' Sap pine 16' "	" "	" "	" "
	✓	6 " 1"x6"x8' Barn pine 24'	" "	" "	" "
	✓	4 " 1"x12"x16' " " 64'	" "	" "	" "
	✓	1 " 1"x6"x9' " " 5'	" "	" "	" "
	✓	8 " 1"x6"x14' W.P. flooring 56'	" "	" "	" "
	✓	Molding 90 ft. lin.	" "	" "	" "
" 24	✓	4 Doz. 5/8" Square nuts, 16#	from G.S.H. by Mess.	Lock repairs	Req. C-17,
Sept. 10	✓	1/2 Doz. 12" Hack saw blades	from G.S.H. by Mess.	Lock repairs	Req. C-18
" 10	✓	1 Steel file Brush	" " " "	" "	" "
" 10	✓	2 Sash cord pulleys	" " " "	Mank. Water Cover, Sciota Mills,	" "
" 10	✓	33 ft. copper sash chain	" " " "	" " " "	" "
" 10	✓	1 7" copper float 2nd Hd.	" " " "	" " " "	" "
" 29	✓	1/2 Keg 60 D wire nails 50#	from G.S.H. by Baggage	Bridges 3-4-10 & Lck. #61	Req. C-20
" 29	✓	5 pcs. cast iron Spud racks, 426#	" by Freight	Dredge	Req. C-18
" 30	✓	7" Wire Spikes 20#	from G.S.H. by baggage	Bridge #57, Leesport	Req. C-19
" 30	✓	7" " " " 60#	" by S.H. Truck	Bucanan St. Rdg	Req. C 20
" 30	✓	2 1/3 yds. White Table oilcloth 45" Wide .34 Per yd. .80	from N. Snellenberg & Co. Market, 11 to 12 Phila. Pa,	for Mechanic's Cove	Req. C-18
" 30	✓	1 Borolon Grinding wheel, 7"x1 3/8"x 15/16 Hole	from Abrasive Company Facony & Fraley sts Bridesburg, Phila. Pa.	Mechanic's Cove	" "

Material Received in October 1936

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Oct. 5	✓	1 Pc. 10"X12"X20' fir 200' B.M.	from The Lbr. & Millwork Co. York & Butler St. Phila. Pa	Bridge #3	Req. C-19
" 5	✓	1 " " 18' " 180' "	"	" "	" "
" 5	✓	3 " " 16' " 480' "	"	" "	" "
" 5	✓	1 " 4"X8"X20' " 53' "	"	" "	" "
" 5	✓	1 " 4"X10"X18' " 60' "	"	Bridge no. 4	" "
" 5	✓	1 " 10"X12"X24' " 240' "	"	Bridge no. 10	" "
" 5	✓	1 " " 20' " 200' "	"	" " "	" "
" 6	✓	2 " 12"X12"X30' fir 720' B.M.	"	Bridge no. 45	Req. C-20
" 6	✓	3 " " 26 " 936' "	"	" " "	" "
" 6	✓	8 " 10"X12"X26' " 2880' "	"	" " "	" "
" 6	✓	2 " 12"X12"X3' " 72' "	"	" " 51	" "
" 6	✓	5 " 10"X12"X24' " 1200' "	"	" " "	" "
" 6	✓	1 " " 22' " 220' "	"	" " "	" "
" 6	✓	2 " 10"X10"X20' " 333' "	"	" " "	" "
" 6	✓	3 " " 16' " 400' "	"	" " "	" "
" 6	✓	2 " 4"X10"X26" " 173' "	"	" " "	" "
" 6	✓	18 " 3"X12"X20' " 1080' "	"	Bingaman St. Bdge	" "
" 6	✓	1 Keg 7" Wire Spikes 100#	from G.S.H., by Frt.	Bridges & Mile Level	" "
" 6	✓	60D wire nails 62#	" " "	" " "	" "
" 7	✓	1 Pc. 4"X8"X16' fir 43' B.M.	from Lbr. Yard.	by S.H. Truck, Bingaman St. Bdge	Req. C-20.
" 7	✓	3 Pcs. 10"X12"X20' " 600' "	from Lbr. & Millwork Co. Phila. Pa	Bridge no. 31	" "
" 7	✓	1 " " 16' " 160' "	" "	" "	" "
" 7	✓	11 " 6"X8"X22' " 968' "	" "	" 33	" "
" 7	✓	11 " " 20' " 880' "	" "	" "	" "
" 7	✓	1 " 10"X12"X20' 200' "	" "	" 35	" "
" 7	✓	2 " 4"X8"X22' " 117' "	" "	" "	" "
" 7	✓	4 " " 20' " 213' "	" "	" "	" "
" 7	✓	1 " " 22' " 59' "	" "	" 28	" "
" 7	✓	1 " " 22' " 59' "	" "	" 41	
" 7	✓	8" Wire Spikes 30#	from G.S.H. by Frt.	Bridges & Mile Level	Req. C-21
" 7	✓	7" " " 40#	" "	" " "	" "
" 7	✓	60D wire nails 12#	" "	" " "	" "
" 9	✓	~~2~~ Doz. 1/4" Square nuts ½#	"	by Mess	Lock repairs, " C-22
" 9	✓	2 " 3/8" " " 1#	"	" "	" "
" 9	✓	1 " 7/8" " " 3#	"	"	Bridge repairs " "
" 9	✓	1 " 1" " " 6#	"	"	" "

Received Car # 24897

Received Car # 21368

Received Car # 24897

Material Received in October, November, 1936

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Oct. 12	✓ 1	Pc. 8"x12"x20' fir 160' B.M.	from Lumber + Millwork co. York Road + Butler St. Philada on	Bridge no 57 Rdg. car #21368	Req. C-19.
" 12	✓ 1	" 4"x12"x20' " 80' "	" "	(Bridge # 57)	" "
" 24	✓ 1	Gal. white paint	from G.S.H. by mess,	Lock House #72	Req. C-22
26	✓ 30	tons, anthracite furnace coal,		Dredge + Tug	" "
~~Nov.~~ 3	✓ 2	Corn brooms	from G.S.H. by mess.	Dredge and Tug.	Req. C 24
Nov. 3	✓ 10	Lbs. cotton waste,	" " " "	" " "	" "
" 4	✓ 1	(Long) spout oil can Eng. Strg.	from G.S.H. by mess	"	" "
" 4	✓ 1	pc. 5" Diam. Stove pipe 2 ft long	from G.S.H. by Mess	"	" "
" 4	✓ 1	" 5" Diam. one end 7" Diam other end Stove pipe taper 2' lgth,	" " "	"	" "
" 5	✓ 2	Pcs. 11"x17" Double thickness American Window Lights	from Genl. S.H. by Mess.	Shop Lock 60	" "
" 5	✓ 1	" 10"x12" " "	" " " "	" " " "	" "
" 5	✓ 1	Car fresh mined anthracite Pea coal,		Dredge and Tug.	Req. C 23.
" 6	✓ 3	Gals. Brown car paint;	from G.S.H. by mess	Roof Lock House #33	Req. C 24,
" 6	✓ 1	Pump Handle (no. 2927) for Myers Pump	From F. E. Myers & Bro. Bro. Co.	Lock House #62	" "
" 6	✓ 1	" " rack (" 2827) "	" " ashland Ohio	" " "	" "
" 9	✓ 3¼	Yds. x (45) 50" Wide, white oil cloth for table	from N. Snellenburg, Phila. Pa. Bill #1.30	Dredge	Req. C-24
" 9	✓ 20	Lin. ft. Rd. Iron ¼" Thrd. Steel 3½#	from G.S.H.	Lock Repairs	Req. C-22
" 9	✓ 20	" " " 5/16 Sec. Hd. 5#	" "	Floating Equipments	" "
" 9	✓ 20	" " " " 3/8 " " 7½#	" "	" "	" "
" 9	✓ 4	Bars 5/8" Rd. Iron Sec. Hd, 67#	" "	Lock repairs	" "
" 9	✓ 16	lin. ft. Sq. Iron 3/8" Sec. Hd. 7½#	from G.S.H.	" "	" "
" 9	✓ 16	" " " " ½" Ref. 14#	" "	Bridge repairs,	" "
" 11	✓ 1	Pc. Oak 3"x12"x20' 60' B.M.	from A. C. Beck, Shippensburg, Pa.	Bridge #45	Req. C-21
" 11	✓ 1	" " 3"x8"x20' 40' "	" " " "	" " "	" "
" 11	✓ 53	" " 3"x10"x16' 2120 "	" " " "	Bridge #33	" C-20,
" 14	✓ 2	1¼"x7½" track Bolts 9½#	from G.S.H. by mess	Dredge	" C-25
" 14	) 2	1¼" nuts	" " " "	"	" "
" 14	✓ 3	Pcs. 3"x12"x16' Oak 144' B.M.	Lbr. Yard on Rdg. car #5359,	Bridge #57	Req, C-19
" 14	✓ 3	" 3"x10"x16' " 120. "	" " " " "	" " "	" "
" 14	✓ 2	" 3"x8"x16' " 64' "	" " " " "	" " "	" "
" 14	✓ 2	" 2"x8"x2' Oak, 5' "	" " on Rdg. car #4434	Bridge # ~~29~~ 42	" C-20.
" 14	✓ 8	" 3"x12"x12' Fir, 288' "	" " " " "	" " 37	" "
" 14	✓ 1~~8~~	" 3"x12"x16' " 48 ~~336~~' "	" " " " "	" " "	" "
" 14	✓ 7	" 3"x12"x16' 336' "	" " " " "	" " 31	" "
" 14	✓ 1	" 2"x8"x3' 4' Oak	" " " " "	" " 29	

Material Received November, December & January 1937, 1936,

DATE.	No. of.	CHARACTER OF.	TO WHOM.	PORT OF	INSTRUCTIONS AT
		CARGO.	CONSIGNMENT.		
Nov. 14	✓	7 pcs. Fir 3"X12"X16' 336' B.M. Rough from Lbr yd. via Rdy # 4434		Bdge # 41,	Reg. C-20
" 14	✓	8 " Oak 3"X12"X16' 384' " S,	" " "	" " 51	" C 24
" 14	✓	8 " " 3"X10"X12' 240' " S	" " "	" " 49	" "
" 14	✓	6 " " 3" X8" X16' 192' " S	" " "	" " 45	" "
" 14	✓	1 " " 3"X12"X1' 3' " S	" " "	" " 51	" "
" 25	✓	2 Gals. Steam Engine Cylinder Oil, from G.S.H. by mess.		Dredge + Reg	Reg C-26
" 25	✓	1 6" Dia. Smoke stack comp. with roof section + Hood by Prt. #20 gauge Galvz. iron Sec Hand 14' ft Total length,		Lock House #64	Reg. C-26
" 27	✓	10 Gals. Kerosene from G.S.H.	by baggage	Dredge + Reg	" "
" 28	✓	2. Oxford lamp chimneys "	by mess,	"	" "
Dec. 15	✓	1 Pr. Brush clippers, 24" Handles # 5408 from Supplee Biddle Hdwe. co 511 Commerce St Philada, Pa			Reg. C-27,
" 23	✓	3 Canal type metal body wheelbarrows, from Ford + Kendig Co, Harrisburg, Pa Recd by Freight charge to One Mile Level			" C-26
" 29	✓	6 Long handles Round point Shovels from G.S.H. by Baggage		4 Oaks Canal 2-1mi level	Reg C-26
" 29	✓	1 Lg. Rd. pt. Shovel Handle new. from G.S.H. By mess,		Dredge	" C-26
1937					
Jan. 2	✓	2 Caboose stove drop grates # 495, from G.S.H. By mess, charge		Dredge + Reg	Reg. C-27
" 5	✓	1 Hack saw frame new. from G.S.H. by mess	Charge to	Bridge Scow Repairs,	Reg C-26
" 7	✓	50 ft. 5/16" Soft steel cable Sec'd. from Scrap yd;		Lock House #60	Reg. C-27,
" 7	✓	½ Doz. 12" Hack Saw blades new from G.S.H.		Dredge + Reg repairs,	Reg C-27
" 11	✓	100# 8D Wire nails, from G.S.H. by Freight		Repairs Floating Eqpt. Locks, Lock Hds. + Bdgs.	Reg C 27
" 11	✓	100# 10 D " " " " " "		" "	" 27
" 8	✓	1 pc. 6" X 9" X 6' fir new 27' B'M, by Prt. Cir 6541		Bridge no. 33	Reg C-20
" 8	✓	1 " 6" X 9" X 4'6" " " 21' " " " "		" 45	" "
" 8	✓	8 " 3" X 11¾" X 17' " " ~~270'~~ 399' " " " "		" 37	" C-20
" 8	✓	7 " 3" X 11¾" X 17' " " 350' " " " "		" 44	" C-21,
" 8	✓	3 " 3" X 11¾" X 17' " " 150' " " " "		" 41	" C-20
" 8	✓	12 " Oak wedges		" 45	" C 20
" 11	✓	3 " 6" X 12" X 4' " new. 72' " " " "		Bridge 3	" C-19
" 11	✓	1 " 6" X 12½ X 12' " " 75' " " " "		" "	" "
" 11	✓	1 " 6" X 9" X 6' " " 27' " " " "		" 4	" "
" 11	✓	1 " " 4'6" " " 20' " " " "		" 3	" "
" 11	✓	8 " 3½" X 8½ X 13' " " 258' " " " "		" 3	" "
" 11	✓	12 " 3½ X 10½ X 13' " " 441' " " " "		" 3	" "
" 11	✓	2 " 3½ X 10½ X 32' " " 196' " " " "		" 3	" "
" 11	✓	5 " 3" X 11¾ X 17' " " 250' " " " "		" 4	" C-19
" 11	✓	4 " 3" X 8" X 16' Y. P. " 128' " " " "		" 4	" "

Material Received in January, February, March, 1937

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Jan 11	6 Pcs.	3"X8"X16' Y.P. New. 192' B.M.	by Pat. car 6541	Bridge Lock 61	Req. C-19
" 11	1 "	3½"X8½"X18' fir " 45'	" " "	" 219.9	"
" 11	5 "	3"X8"X16' Y.P " 160'	" " "	" 10	" "
" 12	1	#3 D.H. Scoop Shovel new,	from G.S.H. by Wells,	Dredge	" C-26
Feb. 6	6 Pcs.	Steam gauge fibre Washers #7751,	from G.S.H. by Mess.	For Dredge & Rug.	Req. C-1
" 13	2	no. 5 mud Plugs	from G.S.H. by mess	Dredge and Rug,	Req C-3,
" 19	50	3/8"x1" bolts,	from G.S.H. by Baggage	Rug	Req. C-3
" 19	50	3/8" Square nuts 2#	" " "	"	" "
" 19	278	3/8"x1" Rivets 13#	" " "	"	" "
" 19	8	3/8"x4¼ " 2#	" " "	"	" "
" 19	17	3/8"x1¼" " 4#	" " "	"	" "
" 19	12	¾"x1¼" " 4#	" " "	"	" "
" 19	6	5/8"x7½" bolts Countersunk Heads	" "	"	Req. 2
" 19	6	5/8" Hexigon nuts ¾#	G.S.H. "	"	" "
" 19	4 Doz.	¾" Square nuts 12#,	From G.S.H. " "	Bage, repairs	" C-1
" 26	16½ lbs.	Extra hard babbit	Parsons W.B. " Mess.	Dredge	" C-4
" 12	5	#1 fire extinguisher charges	" " "	Lock no. 60	" C-27
" 12	2½ Gals.	A. & S. fire extinguisher	" " "	" "	" "
Mar.					
1	2 pcs.	2"X4¼" draw bar ferrules,	From G.S.H. By Mess	Dugboat	Req. C-3,
1	4 "	Cylinder rings,	" Loco Shops "	" Dredge	" C-2
1	2	Dredge Eng. bolts ¾"X2⅜"	" " " "	" "	" C-2
1	1	12" Hand bastard file	From G.S.H. "	" "	" C-1
3	6 pcs.	3"X8"X16' Oak. 192' B.M.	from Lbr. Yd. Rdg.	Lock House # 64	" "
3	1 "	3½"X8½"X14 fir 35'	" " " "	" " "	" "
3	6 "	4"X8"X16' " 256'	" " " "	" " "	" "
3	6 "	3½"X8½"X12 " 179	" " " "	" " "	" "
3	1 "	1"X12"X10' Oak 10 "	" " " "	Small boat, (Dredge)	" C-2
3	2 "	6½"X10½"X10' 157# ~~68'~~	" " " "	Dug boat	" "
3	1 "	4"X12"X2½' " 10 "	" " " "	" "	" "
3	1 "	3"X12"X18' cypress 54'	" " " "	Floating Equipment	" "
3	1 "	8"X8"X4' Oak 22'	" " " "	Repairs to Lock Gates	" "
3	2 "	2"X12"X16' fir, 64'	" " " "	Deck Scow repairs	" "

Material Received in March, April. 1937

DATE.		No. of. CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT	
Mar 3	✓	5 pcs. 1" X 12" X 16' Beryfine 80' B.M. from Lbr. Yd. Rdg.	charge	Dredge & Scows	Req.	C-2
" 3	✓	2 " 3" X 10 X 20' fir 100' "	" " " " "	Tugboat	"	"
" 3	✓	2 " 2" X 12" X 16 " 64'	" " " "	Mechanic Scow	"	"
" 3	✓	2 bales no. 1 Marine Spun Oakum See Hd.	" Freight. "	Dredge & Scows	"	"
" 4	✓	1 Long Handle for Scoop Shovel, from G. S. H.	by mess	Six Mile Level	Req.	C 1
" 4	✓	1 " " " Rd. pt. " " See Hd.	" " " "	" " "	"	"
" 4	✓	1 " #3 Scoop Shovel See Hd.	" " "	Shory Level,	"	"
" 6	✓	2 Corn brooms, from G. S. H.	" "	Floating Equipments	"	C-4
" 6	✓	5# Roll Sulphur " "	" "	Lock Repairs	"	"
" 6	✓	3 Sledge Handles " "	" "	" "	"	"
" 8	✓	5 2½ Gal. A & S. fire exts. Good See Hd. from G. S. H.	by Baggage	{ 1 Dredge, 1 Mc. Scow, 1 Tug, 1 Blacksmith Shop & Carpt Shop, Lock no. 60.	Req.	C-27
" 8	✓	1 Pc. 3/8" x 13¼" x 30" Boiler Iron, new, from Loco Shop,	by baggage	Tugboat	Req.	C-3.
" 8	✓	1 Pc. 2½" x 2½" x 48" axle " " "	" " "	" "	"	"
" 8	✓	2 Pcs. ½" x 6" x 3' 6' Soft Steel "	" " " "	Dredge crane	"	"
" 9	✓	2 " 3/16" X 15" X 30" Sheet Iron Hull plates. "	" " " "	Tugboat	"	"
" 10	✓	4 Pcs. 3" x 12" x 16' fir S. 1 S. 192' B. M. new " Lbr yard	by Freight	Dump Scow repairs	Req.	C-2,
" 13	✓	3 Pcs. 5 5/8" Long Swinging Lever bolts from Loco Shop,	Mess.	Dredge	Req.	C-3
" 16	✓	2 " 3/16 x 15" x 36" Sheet Iron, Hull plates from Loco Shop.	by baggage	Tugboat	"	C-3
" 17	✓	48 ft. ½" Rd. Reading Steel 35#	" " " " "	Dredge	"	C-4
" 17	✓	2 lbs. Ruberoid Roofing nails " G. S. H.	" "	Mechanic Scow,	"	C-2
" 22	✓	1 Pc. 3/16" x 14" x 3' 1" boiler Stack from Loco Shop,	" "	Tugboat	"	C-3
" 22	✓	1 " 3/16" x 14" x 3' 7" " "	" " " "	" "	"	"
" 22	✓	4 " Stern bearing bolts 15" long " "	" " "	" "	"	"
" 22	✓	2 bbls. Boat Pitch from Philada.	by Frt.	Dredge and Scows	Req.	C 2
" 24	✓	3 Gals. Ruberine Paint from G. S. H.	by Frt.	Mc. Scow Repairs	"	"
" 24	✓	6 " Brown Car Paint " " "	" "	Dredge & Small boats	"	"
" 24	✓	15# Pinkers Cement " " "	"	" & Mc. Scow	"	"
" 31	✓	50 ft. 7/8" Hoisting chain, 415#	by Frt.	Dredge	"	C-4
" 31	✓	3 Doz. 3/8" Square nuts from G. S. H.	by Mess	Tugboat Hull	Req.	C-5,
" 31	✓	15 Pcs. ½" X 4½" cone Head Rivets, from G. S. H.	by Mess.	" "	"	"
" 31	✓	4 Cylinder cocks from Loco Shop	by Frt.	Dredge		
Mar. 26	✓	48 ft. Lin 1" ¼ Rd. Molding from Lbr. Yd.	by Freight	Lock House #64	Req.	C-1
April 1	✓	36 pcs. 1" X 6" X 12' W. P. flooring 216' B.M "	"	" " "	"	"
" 1	✓	½ Gal. Black Paint, from G. S. H.	by Mess.	Tugboat	"	C-5
" 1	✓	1 " Linseed Oil " " "	" "	" "	"	"

Material Received April 1937

DATE.		CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT	
April 2	✓	1	Gal. Red Lead Paint	from G.S.H. by Mess	Tugboat	Req.	C-5
" 2	✓	1	Gal White paint	" " " "	" "	"	"
" 6	✓	4	Sheets #2 emery cloth	" " " "	Dredge and Tug repairs	Req.	C-6
" 6	✓	1	Doz. 1# cans Caustic Soda	" " " "	Dredge and Tug supplies	"	"
" 6	✓	6	Pcs. 1/2" x 1" Patch bolts 2#	" " " "	Tug repairs	"	"
" 7	✓	1	" #118 Handle for 1 man cross cut saw.	" " "	Dredge "	"	"
" 7	✓	2	" Brooms Palm fibre	" " "	" and Tug supplies	"	"
" 8	✓	1	pc. 12" x 12" 1/16" thick Sheet Lead 4#	" " "	" " "	"	C-7
" 8	✓	2	pcs. Oxford Lamp Chimneys 2 1/2" Dia	" " "	Dredge supplies	"	C-6
" 8	✓	1	Ea. 14 Qt. Galv. Water bucket,	" " "	" " "	"	"
" 8	✓	2	corn brooms	" " "	" " "	"	"
" 12	✓	10	Lbs Tallow	from G.S.H. by Art	" "	"	C-7
" 12	✓	5	" cotton waste	" " " "	" "	"	"
" 12	✓	10	GALS. Steam ~~Cyl~~ Engine oil	" " " "	" "	"	C-6
" 12	✓	5	" Steam Cylinder "	" " " "	" "	"	"
" 12	✓	10	" Rec. Car Oil	" " " "	" "	"	"
" 12	✓	10	" Kerosene	" " " "	" "	"	"
" 12	✓	1	Box 1/2" garlock packing #150 2 Lb. 3 oz.	" " " "	" "	"	7
" 16	✓	130	ft. 1 1/4" Manila rope 51 Lbs.	from Genl. S.H. by Art.	Dredge, Tug & Scows	"	C-6
" 16	✓	400	" 1" " " 109 "	" " " " "	" " "	"	"
" 16	✓	300	" 3/4" " " 53 "	" " " " "	" " "	"	"
" 16	✓	50	" 5/8" " " 6 "	" " " " "	" " "	"	"
" 12	✓	1	Pc. 3' x 3' Sheet asbestos 1/16" thick	" " " by Barg.	" " Supplies	"	C-7
" 12	✓	1	" 2' x 2' " Rubber 1/8" "	" " " " "	" " "	"	"
" 17	✓	2000	Lbs. Bituminous Coal	from S.L. Shanaman, Phil. Pa	Floating Equip. Lock & Bdgs	"	"
" 24	✓	50	Lbs. 1 Lb. pcs boiler Compound,	from Henry Bower Chemical Co. Phila Pa.	Dredge & Tug Boilers,	"	C-6
" 28	✓	1	12" Hand bastard file,	from G.S.H. by Mess	Dredge repairs	"	C 6
" 28	✓	1/2	Doz. 12" Hack Saw blades,	" " " "	Dredge & Tug repairs	"	"

Material Rec'd, May, 1937, June July, 1937

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
May 3	✓	2 Dusting brushes,	from Genl S.H. by Mess.	Dredge & Tug,	Req. C-6.
" 5	✓	2 Manure Forks,	from Stockton Hdwe Co. by Mess	1-8 mile level Lock no. 68,	" C-8.
" 6	✓	1-14 Qt Galv'd. Water Bucket,	from G.S.H. by Mess.	Mechanic Scow	" C-9.
" 10	✓	2 chopping axes with handles	from G.S.H. by Mess.	barge Lock #68 " 1-8 mile Level	" C-8
" 13	✓	2 4" Paint Brushes	" " " "	Mechanic Scow repairs	" C-9.
" 28	✓	1 cast iron Dipper Cage Sheave, 10½	from Gen. S.H. by baggage	Dredge	" C-9
" 28	✓	1 Steel dipper Cage Shaft,	" " "	" "	" "
June 4	✓	1 Grass Scythe, See Hand,	From G.S.H. by mess	Eight Mile Level	Req. C-11
" 4	✓	1 Snathe Second Hand	" " " "	" " "	" "
" 7	✓	1 Doz. ⅞" Square nuts 1½#	" " " "	Feeder House 68	Req. C-10
" 7	✓	1 Oil cup Glass, 2½ Diam x 2⅜ Ty,	by Mail	Tugboat	" C-9.
" 22	✓	1 Pc, 3" x 6" x 16' fir S.4 S. 24' B.M.	from S.S. Neely & Sons	Dump Scow 1926,	Special Order
" 22	✓	1 " 3" x 8" x 16' " " 32 "	" " " "	" " "	" "
" 23	✓	1 Gal. Ivory Flat Wall paint	" G.S.H. by Mess.	Lock House 63	Req. C-10.
" 25	✓	10# Tinkers Cement	from G.S.H by Mess	Rps. to Lock House Rf.	Req. C-12
" 25	✓	5# Ruberoid Roofing Nails	" " " "	" " "	" "
" 25	✓	2 Doz. ½" Square nuts 1¾#	" " " "	Dredge repairs	" "
" 15	✓	½ bundle 18" cedar Shingles,	from Andrews & Son Phoenix.	Lock House 59	Req. C-7
" 28	✓	20 ft. Iron ⅞ Rd. Iron Wire Steel	from G.S.H. 20 lbs. by Frt	Feeder House 68,	" C-10
" 28	✓	10 lbs. cotton Waste,	from G.S.H by Mess.	Tug & Dredge	" C-12
July 6					
" 7	✓	1 car Pea coal by Freight		Dredge & Tug	Req. C-12
" 8	✓	2 Hoisting and backing clutches,	by Mess.	" cleaning bucks	" C-11
" 8	✓	4 Pcs. Oak. 3" x 6" x 12' 72' B.M	from Lbr. Yd. by Frt.	Feeder House 68	Req. C-10
" 9	✓	4 Pcs. Y.P. 3" x 8" x 16' 128' B.M.	" " " " "	Lock House 61	" "
" 9	✓	1 Pc. 2" x 12" x 16' fir S1S 32' B.M.	" " " " " "	" 63	" "
" 9	✓	1 " 1" x 12" x 16' Bard Pine S.1.S. 16' B.M.	" " " " " "	" "	" "

Material Received in August, September, October, Nov. 1937

DATE.		CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
August						
20	✓	1	Grass Scythe new From	G.S.H. by Mess	Lock 61	Reg C-14
20	✓	1	Snathe Sec Hd.	" " " "	"	" "
20	✓	2	Scythe Whet Stones	" " " "	" & Corgy Canal	" "
20		1 pc. 1 3/8" x 1 3/8" x 34" Fy. 20#	From new	" " " "	Dredge	" "
21	✓	5 Gals. Steam Engine Oil	" " " "	" "	" Tug	" "
21	✓	1 " Black boiler Paint	" " " "	" "	" "	" "
21	✓	3 pcs. 5" Papered Saw files	" " " "	Repairs Lock Houses,		" "
12	✓	92 ft. 5/8" cable 57½# Sec Hd.	" " " "	Dredge		" C-15
Sept. 4	✓	1 pc. ~~Spout~~ oil Cans Eng. Spring	From G.S.H. by Mess	Dredge	Tugboat	Reg C-15
" 10	✓	1 R. Pin lbr. 4"x8"x7' 19 B.M	" Lumber Yd. by Art.	Lock House 36-7 R.E. order 13-53-200		Reg C-15
" 10	✓	1 " Y.P. " 3"x4"x16' 16' "	" " " "	" " "		" "
" 10	✓	10 " Fir Flg. 2"x6"x18' 180' "	" " " "	" " "		" "
" 9	✓	4 Gals. Ruberine Paint from	G.S.H. by Art.	Roofs Lock 68		Reg. C-14
" 9	✓	6 " Brown Car " "	" " " "	" " "		" "
" 9	✓	10 lbs Roof Cement "	" " " "	" " "		" "
" 15	✓	1 bbl. Kerosene 50 Gals.	" "	Feeder House F. 68		" C-16
" 15		1 Steel Barrel # 857 was Returned 9/15/37		& Coal Store House,		
" 17	✓	2 Gals Cream Color Paint	" " by Mess	Lock House 64		" C-16
" 27	✓	2 Corn brooms from	G.S.H. by Mess	1 Tug & 1 Dredge		Reg C-16
" 27	✓	14 pcs. 2 ft. Lg. 5" Galv Iron Stove Pipe, from	G.S.H. by Mess,	Feeder House 68		" "
Oct. 11	✓	30 tons Furnace Coal, at	Mauk. by Frt.	For Feeder House 68		Reg. C-17
" 25	✓	20 tons Pea coal at	Bridgeport by "	for Dredge & Tug		Reg C-18,
" 26	✓	90 ft. 5/8" Steel cable from	Loco Shop by Frt.	for Dredge		Reg. C-15,
" 28	✓	3 pcs. 4"x6"x 14 ft 84 B.M. from	Lbr. Yard. by "	for Well Floor Lock 66		Reg C-18
" 28	✓	2 " 2"x6"x18" Fir Flg. 36 F.B.M.	" " " "	" " "		" "
" 29	✓	2 " 6"x9"x20 fir 180' F.B.M.	" Car Rdg. 13488	Lock Props Lock 69 & 70		" "
" 29	✓	3 " " 18 " 243'	" " " "	" " "		" "
Nov.						
29	✓	1000 pcs (4 Kegs) ½" x 10" Dock Spikes	From Jamison Steel & Iron Co	Columbia Pa		
			705 Lbs.	Beach Rock Dam		Reg. C-19,
"	✓	100 " (1 Keg) 5/8" x 10" "	116 "	" " "		" "
"	✓	12 " (1 Bdle) ¾" x 16" "	32 "	" " "		" "
			853	# 2,985		

Material Received in Dec, March, April, May, July + Aug. 1937, '38

DATE.	✓	No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Dec. 10	✓	3 Pcs	3"X12"X18' fir S.4S. 216' B.M.	From Eastern Penn'l. Lbr. Co, Wilmington Del, #36.50		Req. C 19
10	✓	7 "	" X11' " " 308' "	By Frt. on Rdg. 21431. for Repairs Black Rock Dam " #36.50 "	"	" "
10	✓	65 "	" X10'6" " " 2730' "	" #35.25 "	"	" " "
10	✓	15 "	" X 5' " " 300' "	" #35.50 "	"	" " "
10	✓	77 "	" 4"X8"X10'6" " 2156' "	" 35.25 "	"	" " "
23	✓	1 Pc.	10"X12"X13' fir S.H. 130' "	by Frt. G.S.H. Lbr. yd. repairs	"	" "
23	✓	1 "	4½"X10"X 6' fir New 28' "	" " " " "	"	" "
23	✓	3 "	4"X9"X20' " " 180' "	" " " " "	"	" "
Jan + Feb. 1938 nothing received,						
March 1938	✓	3 lbs.	20D wire nails	by Freight, Job no. 13-52349	Benard House Oaks	Req. C-2.
" 29	✓	2 Gals.	Steam Engine oil	by Mess from G.S.H.	Dredge + Rig	" C-1
" 29	✓	5 lbs	cotton waste	" " "	" "	"
" 29	✓	3 Gals.	Black oil	" Water Power Feeders Lock 68		"
April 19	✓	11 Pcs.	2"X6"X18' fir flooring 198' B.M.	From Lbr. yd., by Frt. Job # 13-52349 Benard House Oaks.		Req. C-2.
" 19	✓	1 "	1"X12"X16 B.P.S.4S. 16' B.M.	" " " " "	"	" "
May nothing received						
June 29	✓	2 Pcs.	Rack for raising gate	From S. Morgan Smith Co Feeders Lock #68		Req C-2
" 29	✓	2 "	Pinions " " "	York, Pa. " " for Turbine Wheel		" "
" 29	✓	1	Pinion Shaft " "	" " " " "		" "
July 25	✓	3 Pcs	6x9x27 fir 365' B.M.	From Lbr. yd. by Frt Lock no. 66		Req C-4
25	✓	8 "	2"X12"X16 fir 96' "	" " " " " " "		" "
Aug. 1	✓	1 Pc.	3"X10"X6' Oak. 15' B.M.	From G.S.H. Lbr. by Frt. Lock no 59		Req. C-3.
1	✓	3 "	2½"X8"X8' " 40' "	" " " " " "		"
1	✓	1 "	2½"X8"X10' " 17 "	" " " " Side Sluices lock 60		"
13	✓	1 gal.	Black Boiler Paint.	From G.S.H. by Mess	Dredge + Rig Boilers	Req C-11
17	✓	4 Pcs.	3"X10"X20' fir 200' F.B.M.	From Lbr. yd. by G.S.H. Truck, Note 1 Hr. Hauling	Bridge #62	Req. 9
17	✓	16 "	3"X12"X6' " 288' "	" " " " " "	chestnut St. Bdge	" 9
" 18	✓	1 Pc.	Corn Broom	From G.S.H. by Mess.	Lock no 68 Feeder House	" 11
" 20	✓	10 lbs.	60D Wire nails	From G.S.H. by Mess	for Bdges 52 + Chestnuts	" 9
" 20	✓	25 "	60D " "	" " " "	Plymouth Creek W.W.	" 12
" 20	✓	20 "	40D " "	" " " "		" 12

Material Received in August September 1938

Date		Cargo: Character of	No. of	Consignment: To Whom	Port of	Instructions at	
Aug 22	✓	Fir lbr. 6½"X6½"X16 ft.	1 Pc.	From Lbr. yd. G.S.H. by Frt. Rdg. 5132,	Plymouth creek Waste Weir	Reg.	12
" 22	✓	" " 4½"X6½"X20 "	1 "	" " " "	" " "	"	"
" 22	✓	" " " X16 "	1 "	" " " "	" " "	"	"
" 22	✓	" " 3"X12"X18' "	7 "	" " " "	" " "	"	"
" 22	✓	" " 2"X12"X16' "	7 "	" " " "	" " "	"	"
" 26	✓	Terra Cotta pipe 24"X36" long	10 pcs	by Frt. from G.S.H.	Lindermans Trunk.	Reg.	C-2
" 30	✓	Y.P. Lbr. 6"X9"X16'	1 Pc.	by Frt. from G.S.H. lbr. yd	Bridge #64	"	10
" 30	✓	Fir " 4"X12"X16'	10 "	" " " " "	" " 65	"	10
" 30	✓	" " 4½X6½"X16'	2 "	" " " " "	" " 63	"	10
" 30	✓	" " 3½"X10½"X12'	8 "	" " " " "	" " 64	"	10
" 31	✓	" " 3½"X10½"X12'	8 "	" " " " "	" " 34	"	7
" 31	✓	Y.P. " 6"X8"X14	1 "	" " " " "	" " 33	"	6
" 31	✓	Fir " 3½"X10½"X12'	5 "	" " " " "	" " 31	"	7
" 31	✓	" " " X12'	19 "	" " " " "	" " 28	"	7
" 31	✓	Y.P. " 6"X8"X16'	1 "	" " " " "	" " 11	"	6
" 31	✓	Oak " 3"X10"X4'6"	2 "	" " " " "	" " 11	"	8
" 31	✓	" " 2"X10"X3'	2 "	" " " " "	" " 11	"	8
" 31	✓	Y.P. " 6"X8"X16' Even Depth 11 Pcs.		" " " " "	" " 50	"	6
" 31	✓	Creo. " 10"X10"X4'	1 Pc.	" " " " "	" " 50		6
" 31	✓	Fir " 4"X10"X16'	1 Pc.	" " " " "	" " 49	"	7
" 31	✓	Y.P. " 6"X8"X16' E.D.	8 "	" " " " "	" " 49		7
" 31	✓	Fir " 3"X8"X3'	1 "	" " " " "	" " 47	"	7
" 31	✓	" " 4"X8"X16'	2 "	" " " " "	" " 47	"	7
" 31	✓	Y.P. " 6"X8"X16'	1 "	" " " " "	" " 46	"	6
" 31	✓	" " " X16'	2 "	" " " " "	" " 42	" ~~6×4~~ 2 ×5×3	6
" 31	✓	Fir " 3"X10"X16'	3 "	" " " " "	" " 42	" ½	7
" 31	✓	" " 3½X10½X12'	14 "	" " " " "	" " 42	"	7
" 31	✓	" 3"X12"X16' S.1.S.	18 "	" " " " "	" " 41	" ~~6×4~~ 2 ×3×8 ½	7
" 31	✓	" 3"X10"X16	4 "	" " " " "	" " 41	"	7
" 31	✓	" 6"X8"X14	1 "	" " " " "	" " 41		8

Sept. Received at Conshohocken on Rdg. Car 27704 Frt. charges $9.18

Date		Cargo: Character of	No. of	Consignment: To Whom	Port of
14	✓	Y.P. lbr. 10"X10"X27'3"	1 Pc.	from Port Reading	Plymouth creek W.W.
14	✓	" " " X 26'9"	1 "	" " "	" "
14	✓	" " " X 8'	4 "	" " "	" "

Material Received in September October 1938.

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Sept. 16	Received at Birdsboro on C.N.J. No 17924, From Heil. Store House, Reading, Pa.				
" 16	Fir S.I.S.	3"x12"x16', 18 Pcs.	Bridge no 41		
" 16	Received at Birdsboro, on Rdg Car no. 28854, From Port Reading,				
" 16	Y.P.	10"x12"x18' 1 Pc.	Bridge no 41		Reg. 6
"	"	10"x10"x26'3" 1 "	" "		" 6
"	"	" x18' 4 "	" "		" 6
"	"	6"x8" x18' 10 "	" "		" 6
"	"	4"x8" x18' 15 "	" "		" 7
"	"	10"x12" x16' 1 "	" 42		" 6
"	"	4"x8" x22' 8 "	" 42		" 7
"	"	" x20' 8 "	" 42		" 7
"	"	" x18' 4 "	" 42		" 7
"	"	10x12x16' 2 "	" 43		" 6
"	"	4"x8"x18' 3 "	" 43		" 7
"	"	10"x12"x16' 1 "	" 44		" 6
"	"	8"x12"x16' 1 "	" 44		" 6
"	"	10"x12"x26' 1 "	" 45		" 6
"	"	~~10"x12"x16'~~ 1 "	"		
"	"	10"x10"x26'3" 1 "	" 47		" 6
"	"	" x26'3" 1 "	" 48		" 6
"	"	10"x12"x16' 1 "	" 48		" 6
"	"	" x22' 1 "	" 60		" 6
"	"	5"x10"x16' 2 "	" 61		" 7
"	"	10"x12"x16' 1 "	" 34		" 6
"	"	4"x8"x18' 7 "	" 34		" 7
"	"	10"x12"x14" 2 "	" 33		" 6
"	"	4"x8"x22' 1 "	" 11		" 7
Sept. 28th. 1938 at Birdsboro on Rdg Car no 21930, from Lombard G.S.H.					
28	Fir	S.I.S. 3"x12"x24' 10pcs.	Bridge no. 11		Reg. 8
	Y.P.	" " x12' 1 "	" " 11		" "
	"	" " x16 6 "	" " 33		" "
	"	" " x16 32 "	" " 45		" "
	"	" 6x8x24 4 "	" " 45		" 6
	"	" " x20 16 "	" " 45		" 6
	"	" 3"x12"x12' 12 "	" " 49		" 8
	"	" " x18' 14 "	" " 50		" 8
	"	" " x20' 26 "	" " 50		" 8
	"	" 6x8x18' 22 "	" " 50		" 6
	"	" " x18' 9 "	" " 51		" 6
	"	" " x20' 7 "	" " 51		" 6
	"	" 3"x12"x16' 35 "	" " 51		" 8
Oct. 15	Kerosene	1 bbl. from G.S.H. Rdg. by Frt.		Feeder House 68	
Oct. 31,	Recd. on Rdg. Car 335760,	1 Car Bituminous Coal			
	For Feeder House Track no. 68				

Material Received in November, Dec. Jan, 39 Feb + Mar. 1938+39

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
				Casualty Case #808	
Nov. 2	✓	Oak, S.4.S. 4×5×6' 6pcs.	60' F.B.M. from Lbr. Yd. Mauk.	Lock #69-70	
" 2	✓	" " " 3' 6 "	30' " " " " " " "		
" 2	✓	Fir S1S 3"×10"×16' 12 "	360' " " " " " " "		
" 2	✓	" rough 6×8×20 1 "	80' " " " " " " "		
" 22	✓	Nails, 20 D Wire, 5 Lbs.	from G.S.H. by Mess.	Lock no 69 Jenice,	Reg. 17
" 29	✓	Fir Lbr. 2"×4"×16' 10 Pcs.	" " Lbr. Yd. Prt.	" " " "	" "
Dec 2	✓	Cement, 2 bags @ .59, Class 3,	from G.S.H. Prt,	Lock House no 59	" "
" 9	✓	Sand 600 lbs.	from Saint clare by Prt. at .00035	Lock House no. 59	" "
" 10	✓	Roof cement 5 Lbs.	from G.S.H. by mess. Class #7 Price .03 per lb.	Water Power Feeder House Mauch Chunk Pa.	" C-2
" 10	✓	" " 2 "	" " "	Repairs to Lock Houses	" 16
" 10	✓	" " 2 "	" " "	Lock no. 60 Phoenix Pa. Lock #66 Conshohocken Pa.	" 18
" 22	✓	Spikes, 7" Wire 4 Kegs	" " by Prt.	" Bdges. 6+8 Mile Levels	" 8
" 21	✓	Ruberine roof Paint, 2 Gals.	" " Mess	" {Elevating Equipment & Dredge & Mechanic Scow	" 11.
Dec. 29	✓	Cast Iron Brake Drum 12 5/8" Diam x 2", 2" bore, Pattern no. 11220 M. With 1/2 x 1/4" Keyway, 38 lbs. Finished from Loco Shop by Mess		Feeders Lock 68 Mauch. Water Power	Reg. C-5
1939 Jan. 6	✓	1 Columbia #6 dry battery,	from G.S.H. by Mess	Price 23, Class 2 B. Mauch Water Power	Reg. 1
" 11	✓	1/2 Doz. 5" Saw files,	from Genl. S.H. by Mess.	Bridge repairs class 45.	" 1
" 26	✓	5-1 Gal. Cans, Roof Coating paint,	from G.S.H. by Prt. Class 47	Repairs roofs Lock House 60. Price $1.60 Per Gal.	Reg. 17,
" 27	✓	5-1 Gal. Cans Roof Coating paint,	from G.S.H. by Prt. Class 47,	repairs roofs Lock House 66, Price $1.10 Per Gal,	Reg. 18,
1939 Feb. 14	✓	Fir lbr. 2"×12"×16' S.1.S. 33 Pcs.	1056' F.B.M. from S.H. lbr. Yd., Class 45 @ .045	by Freight Splash boards on Flat Rock Dam,	Reg. 2
March 22	✓	Brown Car paint 1 1/2 Gals.	from Genl Store House, by Mess.		Reg. 4.
		Charge 1/2 Gal. Small boat	Lock no 68	Shawmont Pa.	
		" 1 " 2 "	" " "	" 66, Plymouthville	
30	✓	3 Corn Brooms	from G.S.H. by mess, Class 36, Price .83		Reg. 3
		1 for	After Section		
		1 "	Six Mile Level		
		1 "	Eight, Five & Two Mile Levels.		

Material Received in April, May, June July 1939.

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
April 10	✓ 1 Keg. 8D wire nails, 100 lbs at .03	class 45 from Genl. S.H. by Frt	To Florence, Pa.		Req. 5
10	✓ 1 " 10D " " " " " "	" " " " "	" " " "		
	charge repairs Fine work Lock Houses, Blges & Locks.				
8	✓ ½ Gal. Turpentine from G.S.H. by Mess.		Hull Tugboat		Req. 5.
24	✓ 5 Gals. Ready Mixed Brown Car paint from G.S.H. by Baggage, class 47 Price .23 Per Gal.		Dredge roof		Req. 6
"	✓ 5 " Red lead ready mixed in oil " " " " "		Tug Tug boat Hull		"
"	✓ 3 " Ready mixed Lead color paint " " " " "		" " Roof		" "
"	✓ 4 lbs. Roof cement " " " " " Price .03 Per lb.		Dredge roof		" "
May 15	✓ 3 Gals. Ruberoid Paint, from G.S.H. by Pass. Price $1.10 Per Gal.		M.C. Sauer roof		Req. 7
24	✓ 1 Doz. 3/4 Sq. Nuts from G.S.H. by Pass. 19 lbs. @ .06 Per lb.		Locks 62 & 61		" 7
25	✓ 2 Kegs 40D wire nails from G.S.H. by Frt 200 lbs @ .03		" "		" 7
29	✓ 2 Pcs Oak. 2" x 12" x 10' 40 B.M. @ .035	" " 70 lbs,	" 62 class 30		" 7
29	✓ 2 " " " x 12' 48' " .35	" "	" "		" 7
29	✓ 1 " " 3" x 10" x 16' 40' "	" "	" "		" 7
29	✓ 3/4" cast washers S.H. 1 Doz. 78 # at repairs Locks 61 & 2, by Frt. from G.S.H.				" 7.

DATE.	No. of.	CHARACTER OF.				TO WHOM.	PORT OF	INSTRUCTIONS AT
June 30	✓ 75 Lbs. 60 D Wire nails from G.S.H. by Frt. Price .03 class 45					To Bds. for	Repairs to Bridges	Req. 10
July 3rd.	Recd. at Birdsboro from Genl. Store House on Rdg. Car # 28 676. For Repairs to Bridges in 2-5-6 & 8 Mile Levels.							
	✓ 10 pcs. Y.P. Lbr.	10" x 12" x 24'	2400 F.B.M.	class 30	Price .043			Req 9
	✓ 4 " " "	" " x 26'	1040 "	" "	" "			" "
	✓ 2 " " "	" " x 16'	320 "	" "	" "			" "
	✓ 1 " " "	" " x 12'	120 "	" "	" "			" "
	✓ 1 " " "	12 x 12 x 35'	420 "	" "	" "			" "
	✓ 1 " " "	" x 32'	384 "	" "	" "			" "
	✓ 1 " " "	" x 34'	408 "	" "	" "			" "
	✓ 2 " " "	6" x 12" x 24'	288 "	" "	" "			" "
	✓ 1 " Oak Lbr.	8" x 12" x 18'	144 "	" "	" .035			" "
	✓ 1 " " "	" x 20'	160 "	" "	" "			" "
July 11	Received by Mess. For Elevating Equipments at Lock 60							
	✓ 5 no. 1 fire extinguisher charges for 2½ Gals. Price						P. & S. class	Fire Extinguishers Req 14
July 13	✓ Recd at Chestnut Street Bridge by Genl. Store House Truck for repairs to floor							
	✓ 12 pcs. Oak Lbr.	4" x 8" x 20	640 F.B.M.	Price .047	class 30	Req. 12		
July 18	Recd. at Birdsboro from G.S.H. Lbr. Yard on Rdg. Car # 7015 For Bridge repairs 2-8 & 6 mile Levels							
	✓ 1 Pc	Y.P. 8" x 8" x 16'	85'	@ 43	class 30			Req 9
	✓ 6 "	" 6" x 8' x 16'	384'					" "
	✓ 2 "	" " x 8'	64'					" "
	✓ 8 "	Fir 4 x 8 x 24'	512'					" 10
	✓ 12 "	" " x 22'	704'					
	✓ 1 "	" " x 18'	48'					
	✓ 2 "	" " x 16'	85'					
	✓ 1 "	" 3" x 8" x 14'	28					

Material Received in July, August, 1939

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
July 18	✓ 36 Lineal Ft. Fir 4"x4" S.4S.		54' @ .045	class 30	Req. 10
	✓ 1 Pc Oak 3"x12"x2'6"		16' " .035		
	1 " " 3"x10"x2'		5		
	✓ 4 " " 2"x8"x8'		42'		
Aug. 11	Lock House Black Rock Dam		acct. R.E. Dept. Job. 13 53-301		
	✓ 6 lbs. 8D wire nails, from G.S.H. by pass, Price .03			class 45,	Req. 16
	✓ 3 " 6D " "				" "
	Recd at Pottstown for Lock no 5+6 account R.E. Dept. Job no. 13-53-300				
" 14	✓ 3 Pcs. 8"x10" Window Lights from G.S.H. by Pass		" .05 Ea		Req. 15
" 14	✓ 2 lbs. 6D. Wire nails	"	" " " "	" .03	" 16
" 14	✓ Recd. at Birdsboro by Pass. for Lock House #5, acct. R.E. Dept. Job no. 13-53-289				
	1 Lb Roof cement from G.S.H. Price .03				Req. 18,
" 19	✓ Recd at Hamburg on Rdg. Car # 24771				
	8 Pcs Fir 10"x16"x24' 2560' for Bge # 63, Price M 60.03			class 30	Req. 13
	1 " Y.P. 8"x10"x16' 107' " " " " .043			" "	" "
	✓ 1 Pc Fir 10"x12"x26' 260 " " #64 " .043			" "	" "
Aug. 24	✓ 2 Gals Black Oil, My K. Water Power Feeder House, class 37, Price .09				" 17
	Recd by mess.				
Aug 28	Recd at Birdsboro on Rdg. Car 28907 for Bges. 6+8 Mile Levels.				
	✓ 10 Pcs. 6"x8"x22' Fir 880' Price 60.03 + Surfacing acct.			class 30	Req. 11
	✓ 10 " " x20' " 800' " " " " " "			" "	" "
	✓ 10 " " x16' " ~~504~~ 640' " " " " " "			" "	" "
	for Bridge no 30, Monocacy Road.				
	✓ 7 Pcs. 6"x8"x18' Fir 504 Price 60.03 + Surfacing acct.			class 30	" "
	for Bridge no 43.				
	✓ 7 Pcs. 4"x8"x18' 336' " " " " " "			" "	" "
	✓ 7 " " x12' 224' " " " " " "			" "	" "
	for Bridge no. 29,				
	✓ 7 Pcs. 4"x8"x16' 299' " " " " " "			" "	" "
	Bridge # 37.				
Aug 25	✓ ½ bag Tinoid for Lock House repairs acct R.E. Dept. Job # 13-53-291				
	by Pt. Pottstown Class 3 Price .30				Req. 15
Aug 25	Recd at Pennsville by Pt. for Lock House repairs, acct R.E. Dept. Job # 13-53-301				
	✓ 1 bag ~~Tinoid~~ Cement 45 cts Price,			Class 3	Req 16
	✓ 1 " Tinoid 30 " "			" 3	" "
Aug 25	✓ Recd at Hamburg by Freight for repairs to Bridges.				
	125 lbs 60D Wire Nails price .03			class 45	Req. 13
Aug 26	✓ 2 Grass Scythe 1 for Lock 68 + 1 for Vincent Canal				" 17
" 30	✓ 1 Sec. Hd. Padlock # 120 required by Mess from G.S.H. Price .33			Class 46	" 8

Material Rec'd. in Sept. October, Nov, 1939

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Sept.					
6	✓ 2 Lbs.	copper nails 1¼" long by Mess	for Mgk. water Power, Feeder House	Price .09 Per Lb.	Req. 20
7	Lock House #51 repairs acct. R.E. Dept. Job no. 13-53-298				
	✓ Fir Lbr. 2"×12"×4'	S.(S. 1 Pc. 8' B.M.	by Freight	Price .045	Req. 18
	✓ W.P. 1"×4"×12'	S.4S. 1 " 4' "	" " "	"	" "
	✓ Ruberoid roofing	⅓ Roll	" " "	1.32	" "
7	Watchmans House Black Rock Dam acct. Dept. R.E. Job no 13-53-301.				
	✓ Fir Lbr 4½"×6½"×16'	3pcs. 117' B.M.	by Frt.	Price .043	Req 16
	✓ W.P. ⅓"×2"×10'				" "
	✓ ⅞" W.P. Flooring	112' B.M.	"	.052	" "
	✓ Oak ⅞"×3½"×3'	2 Pcs.			" "
	✓ 24" cedar Shingles	100 " ⅓ Square	"	3.27	" "
	✓ 6 bags bar Sand	100 lbs.			" "
15	Lock House #54-B, acct. R.E. Dept Job. no. 13-53-300				
	✓ 24" cedar Shingles	100 Pcs ⅓ Sq.	by Frt.	Price 3.27 Per Sq	" 16
16	Lock House #57 acct. R.E. Dept Job no 13-53-291				
	✓ W.P. Flg. 1"×6"×4'	1 Pc. 2' B.M.	by Frt.	Price .052	" 15.
23	✓ 2 Sec. Hd Grass Scuttle	from G.S.H. by Mess	1 for Oaks Canal		Req. 20.
			1 " Coushatta Canal		" 8,
15	Lock House #33 repairs acct. R.E. Dept. Job # 13-53-286				
	✓ 3 lbs. Roof cement	from G.S.H. by Pass	Price .03	Class 47	Req. 19.
Oct.					
9	✓ 3" corrgd. Elbow for Down Spout.	1 Pc.	from G.S.H. by Mess.	Lock House #63. Price 16 cts. class 45,	Req. 22
16	✓ Lock House #33 acct. R.E. Dept. Job. # 13-53-286.	Paint House roof tin			
	✓ 2½ Gals. Brown Car Paint	from G.S.H. by Mess.	Price Per Gal. .9	Class 47	Req. 19.
30	✓ 2 Sec. Hd. Car inspectors Lanterns	from G.S.H. by Mess.	Price	Class	"
	from Feeder House Lock no 68.				
30	✓ 2 lbs. 20 D wire nails	from G.S.H. by Pass.	Price .03 Lb.	class 46	Req. 23
	Acct. R.E. Dept. Job # 13-53-307.				
Nov. 1	✓ 2 Pcs. Y.P. 2"×12"×16'	=B.M. by Frt. Bds. Car 23869.	Price .043 F.B.M.	" 30	" 23
Nov. 1	Received at Birdsboro on Rdg. Car 23869 from Lbt. Yd. Rdg. Hauled by Haspel.				
	✓ 8 Pcs. Oak S.1.S. 3"×12"×12'	288'	Bridges Bricks Lock	Price .041	class 30 Req 11
	✓ 5 " " " 3"×12"×12'	180'	" #11		
	✓ 12 " " " " ×12'	432'	" #29		
	✓ 1 " " " 3"×10"×14'	35'	" #29		
	✓ 2 " " " " ×16'	80'	" #30		
	✓ 6 " " " 3"×12"×16'	288'	" #30		
	✓ 1 " " " 3"×10"×16'	40'	" #33		
	✓ 6 " " " 3"×12"×12'	216'	" #35		
	✓ 1 " " " " "	36'	" " 36		
	✓ 5 " " " " "	180	" " 37		
	✓ 2 " " " " ×14'	84	" " 37		
	✓ 3 " " " 3"×10"×14'	70	" " 37		
	✓ 8 " " " 3"×12"×12'	288	" " 46		
Nov. 2	Received at Hamburg on Rdg. 27961 from G.S.H. Lbr. Yd. Hauled by Savage.				
	✓ 12 Pcs. Oak S.1.S. 3"×12"×12'	432'	Bridge #64	Price .041	class 30 Req. 13.
	✓ 2 " " " 3"×6"×12'	36'	" 64		
	✓ 25 " " " 3"×12"×16'	1200'	" 63		
	✓ 1 " " " 3"×10"×16'	40	" 63		
	✓ 10 " " " 3"×12"×14'	420	" 62		
	✓ 8 " " " 3"×10"×12'	240	" 62		
	✓ 35 " " " 3"×12"×16'	1680	" 57		
Nov 4	✓ ½ Doz. 12" Hack Saw blades.	by Mess.	Bridge repairs	Price .04 Ea.	class 46 Req. 25
" 6	Watchmans House Black Rock Dam acct. R.E. Dept. Job. # 13-53-301,				
	✓ 1 Bag Plaster	from G.S.H. by Pass.	Price .60	class 3	Req. 16
" 11	✓ 1 Saw handle 77, 24" Saw.	from G.S.H. By Mess	Price .39	class 36	" 14

Material received in Nov. Dec. Jan, Feb., 1939-40

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Nov. 18th.	3 Gals.	ready mixed white Paint, for Lock House #64	from G.S.H. Shipped by pass. to Bridgeport Price Class		Reg. 21
18th.	1 Gal	roof Coating, for acct. Lock House #61,	from Gen Store House by Mess, R.E. Dept. Job. # 13-53-289,		" 12
Dec 14th		Smoke Stack Complete for Lock House #64, Bridgeport, Pa,	from Phila. by truck		Reg. 24
Dec. 23,		Rec'd at Birdsboro on Reading Car 6330,			
	Oak. lbr.	2½"×8"×8' 2 Pcs. 53' B.M.	for waste weir		Reg. 24
	Fir "	2"×12"×16' 5 " 160' "	" " "		" "
	Oak. S.I.S.	3"×10"×16' 3 " 120' "	Bridge #44		" "
	" "	3"×12"×14' 3 " 126' "	" #43		" "
	" "	3"×12"×12' 8 " 288' "	" #43		" "
	" "	3"×12"×16' 9 " 432' "	" #30		" "
	" "	3"×10"×16' 19 " 760' "	" #30		" "
Dec 23,		16 lbs. Putty,	from G.S.H. by Mess. for Lock House #64,		Reg. 21,
" 26		Snow pushers 3 Pcs.	1 for Hamburg Canal		Reg. 26
			1 " Six Mile Level		
			1 " Eight " "		
" 26		1 Quart carbon tetrachloride fire extinguisher complete with charge	Feeder House, Lock #68, Mun. Water Power		Reg 26.
" 26		3 water buckets for fire protection use,	" " " " "		" 26
Jan 6		4 Pcs. Spiking mall Handles,	from G.S.H. by Mess. for Bdge. repairs, Class 86, Price .15 Ea.		Reg. 1,
Feb. 16		Fir S.I.S. 33 Pcs. 2"×12"×16', 1056 F.B.M.	from G.S.H. on Rdg. 6477, for Flat Rock Dam Price .044 class 30,		Reg. 2
" 17		½ Gal. Ready mixed White paint, outside use,	from G.S.H. by mess, class 47, Price 86 per Gal. account property protection,		" 3
Mar. 21		2 Great American Saw files 10"	from Genl. S.H. by Mess. Charge - Bridge repairs		Reg. 4,
" 21		2 Gals, ready Mixed Brown Car Paint	from G.S.H. by Mess Charge 1¼ Gal, Small boat Lock 68 ¾ " Small boat Lock #68		Reg. 4,
April 19		Recd at Pleasantville on Rdg. # 17563 A			
		10 bags Portland Cement	from G.S.H. Freight, for Pennypackers Culvert,	Price .045	class 3 — Reg 5&6
		1500 lbs. Bar Sand	" " " " " "	.70 "	Reg 5
		3200 " crushed Rock ¾"	" " " " " "	.90 "	" " 5
		500 " Bar Sand	" " " " " "		" " 6
		10 C.Y. ½" crushed Rock	from Birdsboro on Rdg. 6560A " "		" " 6
May 13th		2 Gals. Light Buff flat Wall paint,	G.S.H. by Frt. for Lock House #64, Price $1.90	class 47,	Reg. 7
" 18		2 Gals cream Color " " "	" " " " " "	1.50	" "
" 31		2 bags Cement,	from G.S.H. by Frt, for Pennypacker's Culvert, Price .45	class 9	Reg. 8
June 1		500 lbs Sand	from Rdg Div. from McParlon for Pennypackers culvert	class 9	Reg. 8.
" 11		25 lbs. 40D nails	from G.S.H. by Pass. for Lock #69-70 Mank. Price .03	class 45	" 10
		material shipped on Rdg. car 18239,			
" 20		1 Pc. 8"×10"×14' 2nd Hd. Frt. Y.P.	93' B.M. from G.S.H. by Frt for Lock #71 " .60	" 30	" 9
" 20		7 " 2"×12"×16' for S.I.S.	224' B.M. by Frt from JK " " " " " " .046	" "	" "
" 20		4 " 2"×12"×10 Oak	80' " " " " " " .034	" 4	" "
" 20		16 " ⅞"×16 ⅜" bolts	from G.S.H. by Frt. " " " " .07 Ea	" "	" "
" "		16 " ⅜" Nuts, Square	2½ lbs " " " " " " 10 lb.	" "	" "

Material Received in June, July August, Sept. Oct. Nov. 1940

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	Price	PORT OF Class	INSTRUCTIONS AT
June 20	✓	25 lbs. 40 D Wire Nails from G.S.H. by Pass	for Lock #71,	.03	45	Reg. 9.
July 15	✓	Received at Manayunk by Freight on Rdg Car # 13317				
	✓	6 Pcs. 4"×8"×16' Y. P. wrought from G.S.H. 4 d 256'	Lock #69-70			Reg 10
"	✓	10, 2"×12"×16' Fir S1S. " " 320'	"			" 10
Aug. 10	✓	44 Lin. ft. 5/8 Dia. Line from G.S.H. by Mess	Lock #72, 6 Lbs.	.21 Per lb.	Class 46,	Reg. 11
" 10	✓	5 lbs. Roofing cement " " "	Lock House # 62,	.03 Per Lb	" 47	" "
Oct. 5	✓	4 Pick Handles, from G.S.H. by Mess.	Vincent Guard Gates	Price .16 Ea.	Class 36	Reg 19
" 5	✓	25 Lbs. 7" Wire Spikes " " " Pass.	Bridges Hang. Canal			" 15
" 5	✓	50 " 60 D " nails. " " " "	" " "	.03 Per Lb	Class 45A	" 15.
" 13	✓	3 Gals. Brown Car paint, " " Mess.	Lock House # 61,	Price .93	Class 47	" 19
" 25	✓	16 Pcs. 5"×2 ft long stovepipe by Mess,	Feeder House Lock 68	20 cts Ea.		" 12
" 25	✓	2 " 5" Elbows " " " "	" " "	12 " "		" 12
" 30	✓	200 Lbs. 60 D wire nails from G.S.H. by Frt.	Bdges 6 & 8 Mile Levels	Price .03 Per Lb.	Class 45A	" 12
" 30	✓	Y.P. Lbr. 3"×12"×16' 7 Pcs. 336' F.B.M.	Shop truck, Bridge 52		Class 30	" 17
Nov. 5	✓ 5	No. 1 Fire extinguisher charges for 2½ Gal. A & S. Fire extinguishers by Mess.	Floating Equipments & Shops Lock 60	Price .10 Ea		" 47-21
Nov. 5	✓	150 Lbs. 7" wire Spikes, by Pass.	Bdges. 6 & 8 Mile Levels	" .03	45A	Reg. 17
" 12	✓	10 Gals. Kerosene, by Frt. from G.S.H.	Feeder House Lock 68			Reg 12
" 13	✓	6 Lbs. asb. Roof Cement " " by Mess.	Lock House 68.	Price .03.	47	" 19
"	✓	4 Items for Stove repairs	Lock House No 72.			" 20
" 29	✓	63700 Lbs. Bituminous Coal on Rdg. 29690	Feeder House Lock # 68.			"
Dec. 7	✓	15 Lbs. Roll Sulphur from G.S.H. by Mess.	for Lock Repairs	Price lb. .06	Class 47	" 22
" 7	✓	1 corn broom, " " "	Feeder House Mauk. W. Power	Ea. .35	36	" 22
1941		Rec'd. on Rdg. 6565A at Hamburg, Pa.				Reg. 15
Jan 27	✓	4 Pcs. 3"×12"×24' Fir 288' F.B.M.	Bridge # 64			
"	✓	8 " 6"×8"×20' Y.P. 640 "	" # 65			" 15
	✓	12 " 3"×12"×12' Oak S1S. 432' "	" # 65			" 15
"	✓	6 " 3"×12"×16' " " 288 "	" # 66			" 15
"	✓	4 " 6"×8"×16' Y.P. 256 "	" # 66			" "
"	✓	12 " Oak wedges 18" long 10" Wide 3" thick at Heavy end	Bridge # 64			" "

Material Received in Feb. March, April, 1941

Date	No. of	Cargo: Character of		Consignment: To Whom	Class	Price	Req.	Instructions at
Feb 17	✓2 Pc.	Y.P. 10"x12"x26'	520' B.M.	Bridge No. 51,	30	.042	13	
	✓1 "	" " x24'	240' "	" " 48				
	✓2 "	" " x16'	320' "	" " 48				
	✓1 "	" " x20'	200' "	" " 47				
	✓1 "	" " x20'	200' "	" " 46				
	✓2 "	" " x16'	320' "	" " 46				
	✓3 "	" " x10'	300' "	" " 46				
	✓1 "	" 8"x10"x16'	93' "	" " 46			15	
	✓2 "	" 3"x10"x20'	100' "	" " 46			14	
	✓1 "	" 3"x8"x20	40' "	" " 45			14	
	✓1 "	" 10"x12"x16'	160' "	" " 44			15	
	✓1 "	" " x10'	100' "	" " 44			13	
	✓1 "	" 6"x8"x16'	64' "	" " 44			13	
	✓1 "	" 4"x8"x4'	11' "	" " 44			14	
	✓1 "	" 10"x12"x20'	200' "	" " 43			13	
	✓1 "	" " x10'	100' "	" " 41				
	✓1 "	" 10"x10"x10'	83' "	" " 41				
	✓1 "	" 8"x8"x3'	16' "	" " 41				
	✓2 "	" 12"x12"x16'	384' "	" " 39				
	✓3 "	" " x16'	576' "	" " 37				
	✓1 "	" 10"x12"x16'	160' "	" " 37				
	✓1 "	" " x10'	100' "	" " 37				
	✓2 "	" 6"x12"x18'	216' "	" " 37				
	✓1 "	" 10"x12"x16'	160' "	" " 36				
	✓1 "	" 4"x8"x21'	56' "	" " 36			14	
	✓1 "	" 6"x8"x16'	64' "	" " 33			13	
	✓2 "	" 10"x10"x14'	233' "	" " 30				
Mar. 17	3	Corn brooms		1 for Hamburg Canal,	36	30 cts.	7	
				1 " Six Mile Level.				
				1 " Eight " "				
March 24		Received at Birdsboro on Rdg 7149 for Bridge repairs, From Genl. Store House Lumber Yard						
	✓3 Pcs.	Oak S.I.S. 3"x12"x16'	144' B.M.	Bridge No. 51,	Class 30		16	
	✓3 "	" " " x12'	108' "	" " 48.				
	✓3 "	" " 3"x10"x14'	105' "	" " 48.				
	✓2 "	" " 3"x12"x12'	72' "	" " 47.				
	✓9 "	" " " x12'	324' "	" " 46				
	✓9 "	" " " x20'	540' "	" " 45				
	✓13 "	" " " x16'	624' "	" " 45				
	✓1 "	" Rough 3"x10"x20'	50' "	" " 46			14	
	✓2 "	" " 3"x8"x20'	80' "	" " 45				
	✓23 "	" S.I.S 3"x12"x12'	828' "	" " 44			16	
Not Rec'd.	2 "	Y.P. Rough 4"x8"x20'	107' "	" " 44			14	
	✓20 "	Oak S.I.S. 3"x12"x12'	720' "	" " 39			16	
	✓2 "	" " " x14'	84' "	" " 39				
	✓6 "	" " " x12'	216' "	" " 37				
	✓20 "	" " " x12'	720' "	" " 36				
	✓3 "	Y.P. Rough 4"x8"x20'	160' "	" " 36			14	
	✓10 "	Oak S.I.S. 3"x12"x12'	360' "	" " 35			16	
	✓11 "	" " " x16'	528' "	" " 33				
	✓1 "	" " 3"x10"x16'	40' "	" " 33				
	✓3 "	" " 3"x12"x16'	144' "	" " 30				
	2 "	" " " x12'	72' "	" " 28				
	✓5 "	" " 3"x10"x14'	175' "	" " 28				
	✓31 "	" " 3"x12"x12'	1116' "	" " 11				
	✓24 "	" " " x12'	864 "	Bridge Ricks Lock.				
~~April~~ March 22	✓8	cap Screw bolts 1/2" x 1 3/4" from G.S.H. by Mess,		Feeder House Lock 68	Class 36	Ea. .02		Req. 3
"	✓8	Hexigan nuts 1/2" 5/8 Lbs.		" " "	"	Lb. .10		" "
April 5	✓2	axe Handles		~~Mauch Canal~~ Blue M.D.	45 B	Ea. .14		" 2
"	✓2	10" Great american Saw files		Bridge repairs	"	" .48		" 2
"	✓2	5" Tapered Saw files		" "	"	" .11		" 2
"	✓1	gal. white Paint Pri'clima		Feeder House Lock 68	47	Gal. 1.19		" "
"	✓1	Sq. handle Rd. Point Shovel 2nd Hd.		Mauch canal	36	Ea. .78		" "

Material Received in April, May and June, 1941.

DATE.	No. of.	CARGO. CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
April					
" 25		Received at Birdsboro on Rdg. 21891,	Hauled by	Haffel, 5 Hrs. Hauling,	
"	✓ 16	Pcs. 6"x8"x20' Y.P. 1280' B.M.	Bridge No 11		Reg. 16
	✓ 8	" " x12' " 384' "	" "		
	✓ 10	" " x12 " 480' "	" 33		
	✓ 8	" 4"x8"x16' " 341' "	" 35		
	✓ 16	" " x18' " 768' "	" 37		
	✓ 5	" " x18' " 240' "	" 39		
	✓ 7	" " x16 " 299' "	" 39		
	✓ 7	" 6"x8"x20' " 560' "	" 44		
	✓ 7	" " x12' " 336' "	" 44		
	✓ 5	" " x18' " 360' "	" 45		
	✓ 10	" " x12' " 480' "	" 45		
	✓ 3	" " x20' " 240' "	" 46		
May 10	✓	1 Snathe for grass Scythe by Mess	Eight Mile Level	Class 1 C 1.13.	Reg. 4
" 17	✓	1 Grass scythe 28" long " "	" " "	" " .94.	
" 27	✓	Rec'd by Express Charges 39 Cts.			
	55 (32)	- Dressed maple cogs for bevel Mortise gear #492 - 3½" face	for Turbine wheel, Feeder House Lock 68		" 2
" 27	✓ 44 (32)	Pine Keys for cogs,	" " " "	" " "	" 2
June 13	✓ 50 Lbs.	40 D wire nails by Pass. from G.S.H.	Lock No 65	Class 45A Price .03	" 6
" 13	✓ 48 pcs	5/8"x17" Lg. bolts threaded, by Frt. "	" " "	" " " .67	" 6
" 13	✓ 48 "	7/8" Nuts, Square 6 Lbs. " "	" " "	" " " .06	" 6
June 16	✓	Rec'd. at Birdsboro on Rdg. 12366'			
	✓ 1	Pc. 10"x12"x20' Y.P. 200 F.B.M.	Bridge No 46		13
	✓ 4	" 6"x8"x20' " Even Depth 320' B.M.	" " "		16
	✓ 2	" " x18' " " " 144' "	" " 45		16
	✓ 3	" " x16 " " " 192' "	" " "		16
	✓ 8	" 3"x12"x16' Oak. S1S. 384' "	" " "		16
	✓ 1	" 10"x12"x20' Y.P. Rough 200' "	" " 43		13
	✓ 2	" 4"x8"x18' " even depth 96' "	" " 39		16
	✓ 6	" " x20' " " " 320' "	" " "	Casualty Case No. 1078	5
	✓ 1	" " x16' " rough 43' "	" " " "	" " "	
	✓ 7	" 3"x12"x16' Oak. S1S. 336' "	" " " "	" " "	
	✓ 10	" " x12' " " 360' "	" " " "	" " "	
	✓ 1	" 3"x10"x12' " " 30' "	" " " "	" " "	
	✓ 6	" 3"x6"x16' Y.P. S4S. 144' "	" " " "	" " "	
	✓ 5	" 2"x4"x16 " S4S 53' "	" " " "	" " "	
	✓ 1	" 10"x12"x20' " rough 200' "	Bridge No 35.		13
	✓ 1	" 3"x10"x16' Oak. S1S. 40' "	" No. 33.		16
	✓ 1	" 10"x12"x30' Y.P. rough 200'. "	" No 11.		13
June 20		Rec'd. at Phoenixville, on Rdg. 12366, for Phoenixville Branch	Canal Waste Weir,		
	✓ 1	Pc. 10"x12"x7' Y.P. rough 70' B.M.			20
	✓ 2	" 10"x10"x10' " " 167' "			
	✓ 2	" 8"x10"x22' " " 293' "			
	✓ 1	" " x17 " " 47' "			
	✓ 12	" 3"x12"x4'6" Oak. S4S, 162' "			
	✓ 1	" 3½"x6"x6' " " 11' "			
	✓ 4	" 3½"x3½"x4' " " 16' "			
	✓ 5	" 2"x12"x6' " rough 60' "			
	✓ 4	" 2"x5"x4' " " 13' "			
	✓ 1	" 2"x10"x16' " " 27' "			

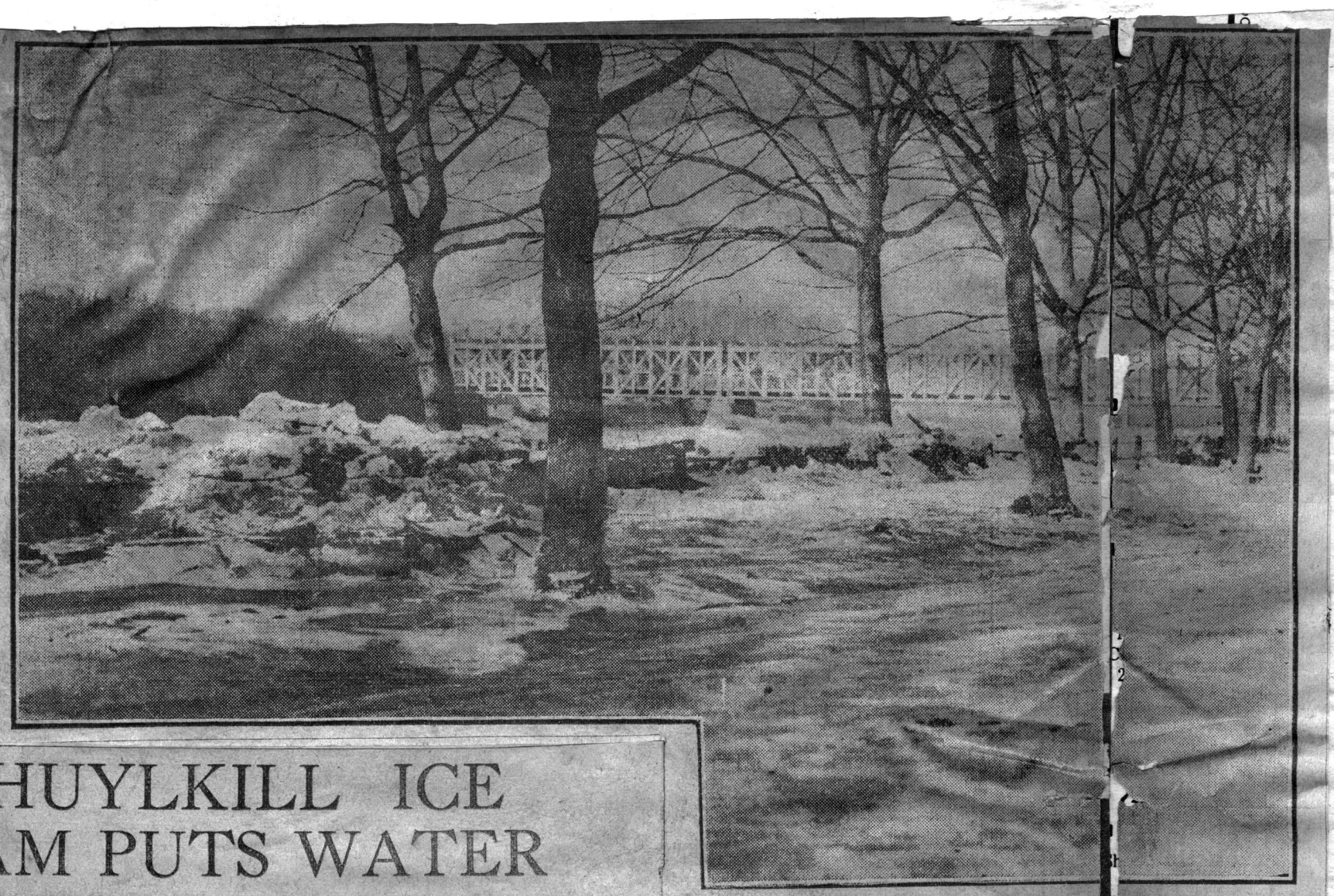
Material Received in July, Aug. Sept. 1941.

DATE.	CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	Class	Price	INSTRUCTIONS AT	Req
July 8	✓	10 Lbs. White Puttey	From G.S.H. by Mess for Feeder House Lock 68,		47	.03		9
8	✓	1 ½ Gal. Container " " " " " " "			36	.08		9
		outside Party						
16	✓	10 Gals. Ruberoid paint, "	" " " "					7
17		Recd. on Rdg 28238 at Phoenixville						
	✓	1 Pc 8"x8"x20' Y.P. 107	From G.S.H. Phoenix Wasterweir		30	.047		20
	✓	1 " 3"x12"x8' Oak 24 "	" " " "		30	.029		20
19	✓	2 Gals Rdy Mixed White Paint	" by Mess. Feeder House Lock No 68					9
21		Recd. at Bridgeport on Rdg. 28238 for Lock No. 65.						
	✓	1 Pc. Oak. 8"x16"x13' 87' BM.	From G.S.H.		class 30	Price .029		6
	✓	5 " " 6⅔"x10½"x10' 284' "						
	✓	1 " " 3"x10"x16' 40' ✓						
	✓	2 " " 2"x12"x16' 64' "						
	✓	6 " " x12' 144' "						
	✓	11 " Fir " x16' S1S. 352 "				.047		
22	✓	1 Roll Ruberoid Roofing,	From G.S.H. by Mess.		3	1	1,28	9
23	✓	Recd. at Manayunk on Rdg. 28238 for Flat Rock Dam						
	✓	33 pcs. 2"x12"x16' fir S1S. 1056 B.M.	from G.S.H.		class 30			8
aug. 4	✓	5 Gals Brown Oxy Paint	Roof of Lock 68		" 47	Price .93		7
aug. 5	✓	1 Pad Lock	From G.S.H. by Mess. for Feeder House (Vincent Dam)		45A	.34		10
	✓	100 ft. Sash cord " "	Feeder House Lock No 68		class 36	price per lb.	.33	10
	✓	1 lb. Lampblack " "	" " "		" 47	" "	.18	10
	✓	10 " White Puttey " "	" " "		" 47	" "	.03	10
aug. 4	✓	3 Ft. Chain Cable, "	Lock Houses. Lock No. 68		class 36	.06		
" 5	✓	5 Lbs. 8 D Wire nails	Lock House 69,		45	.03		12
" 5	✓	10 " 6D " "	" " "		46	.03		12
" 7	✓	3 Gals. ready mixed Brown Carpaint	Lock Houses, Lock No. 68		47	.93		
Note	To be put on next months Requisition already received,							
Sept 2		Recd. at Bridgeport on Rdg. 6707, For Ford St. S Tow Gate						
	✓	1 Pc. W.P. 8"x12"x16' 85. 128 F.B.M.			class 30			Req 13
	✓	1 " Y.P. 6"x12"x12" 72 "			"			"
	✓	5 " " 8"x8"x16' 727 "			"			"
		For Lock No. 66 "			"			
	✓	3 " Oak 2½"x6"x6' 23 " S4S			"			6
	✓	2 " " 4"x5"x14' 47 " "			"			"
	✓	1 " " " x16' 27 " "			"			"
5	✓	by Bright at Phoenixville, For Lock House No 69						
	✓	12 Bundles 18" cedar Shingles						12
9		By Mess.			class			
	✓	1 Corn broom For Feeder House Lock 68			36	.32		16
	✓	1 Snathe for grass Scythe Dunmount Canal			1C ~~45B~~	.07		16
	✓	2 Pcs. 5" Tapered Saw files, Bdge repairs			46B.	Ea .11		16
	✓	2 " 10" Mill files			46B	" .24		16
		For repairs Lock House 36-7" Job "no 13-53-41						
	✓	2 lbs. 20 D Wire nails			45A	.03		15
	✓	8 " 8 D " "			"	.03		15

DATE	No. of.	CHARACTER OF.	TO WHOM,	PORT OF	Class	Price	INSTRUCTIONS AT
	CARGO.		CONSIGNMENT.				
Sept. 13	12 lbs. 8D Wire nails from G.S.H. by Pass	R.E.	Lock House 36-7 Dept. Job. 13-53-409.		45A.	.03	Requisition 14
"	1 bag cement	"	"	"	3	.45	14
"	100 lbs Sand	"	"	"	3	.70	14
24	2½ Gals. White Paint	" by Mess	"	"	47	.91	14
20	10 " Kerosene From G.S.H by Pass	Rq. 93027,	Feeder House Lock 68		37	05	11
24	1 Car Bituminous Coal	" " 28187	" "	" "			
26	6 - 1 gal cans Ruberoid Asbestos asphaltpaint, from Ruberoid Co. 500 Fifth ave. New York, N.Y.		Lock House No 61		47	.40 Per Gal	9
24,	10 Lt. Linseed oil, From G.S.H. by mess		Feeder House Lock 68		47	.87 Per Gal.	16
Oct. 6	Brought from G.S.H. Lbr. yd. with Herberts auto, for Lock House No. 36-7 Job. R.E. Dept. 13-53-409.						
	7 Pcs. 1" x 6" x 18' Y.P. Flooring, 63 F.B.M.				class 30		Req. 14
	2 " 1" x 12" x 14' W.P. S.4S. 28 "				" 30		14
11	1 Gal. White Paint, Pat. claim, from G.S.H. by mess,		Feeder House Lock 68.		class 47	Price .91	17
14	Recd at Phoenixville on Rdg. 4056A for Lock House No. 59.						
	3 Pcs. Bent Pine, 1" x 8" x 12'		24 F.B.M.		class 30		12
	8 " " " 1" x 2" x 16'		21 "		30		12
14	Recd on Rdg. 4056A at Rogersford for Lock House No 57, R.E. Dept Job No 13-53-411						
	2 Pcs Y.P. 4" x 8" x 10' 53 F.B.M.				class 30		15
	1 " " 3" x 8" x 3' 6 "				30		15
	4 " " 2" x 6" x 7' 28 "				30		15
	26 lineal Ft. 2" x 10" Y.P. 43' B.M.				30		15
	2 Pcs. Y.P. 2" x 4" x 16' 21 "				30		15
23	Herbert yd at G.S.H. Lbr. yd for R.E. Dept Job. No 13-53-411						
	0 2 Pcs. Fir 2" x 12" x 7' 28 F.B.M. Note 71 Ft. to be charged						
	2 " 1" x 8" x 6' W.P. S.4S. 8' F.B.M.				class 30		15
	6 " 1" x 6" x 16' W.P. Flooring 48 F.B.M.				30		15
23	Recd. at Bridgeport on Rdg. 4056. for Lock No 65.						
	1 Pc. 3" x 10" x 16' Oak. 40 F.B.M.				class. 30		6
Nov. 5	Recd. at Oaks on Rdg 6967, For Bridges Tail of Lock No. 61						
	1 Pc. 6" x 10" x 14' Y.P. 70 F.B.M.				class 30		Req. 18
	1 " 4" x 10" x 16' " 53 "				"		18
	2 " 4" x 8" x 16' " 85 "				"		18
	1 " 4½" x 6½" x 20 " 49 "						18
	24 " 3" x 12" x 12' Oak S1S. 864 "				"		18
	17 " " x 10' " 510 "				"		18
	1 " 2" x 10" x 12' " Rgh. 20 "				"		18
Nov. 11	Recd. Oaks on Rdg. 29653, for Bridges Tail of Lock No. 61						
	3 Pcs. Y.P. 10" x 12" x 26' 780 F.B.M.				Class 30		Req. 18
	3 " " " " x 25' 750 "				30		18
	6 " " 8" x 10" x 20' 800 "				30		18
	2 " 10" x 10" x 12' 200 "				30		18
	1 Keg 60D Wire nails by Pass.				45A		18
Nov. 12	Recd. at G.S.H. by Pass For Lock House No. 57 Job. No. 13-53-411						
	5 Gals. Ready mixed White Paint				Class 47	Price 1.50	Req 9
Nov. 14,	Recd at Steel Store House Lbr. yd. Note to be put in Req. Req. No. Hauled by Shop truck						
	2 Pcs. Y.P. 3" x 10" x 20' 120 F.B.M for Chestnut St. Bridge						
Nov. 26	2 Gals. Caulking Compound, for Feeder House Lock No 68						Req. 17
	Express charges .50, Recd. From Gliddens Co. Rdg. Pa.						
Nov. 29	1 Pad Lock from G.S.H. by Mess. for Lock No 67						19
" 29	2 Spiking Mell Handles " " Bridge repairs						19

 Material received in Dec. 41 1941.

DATE.		CARGO. No. of.	CHARACTER OF.	CONSIGNMENT. TO WHOM.	PORT OF	INSTRUCTIONS AT
Dec.						
1	✓	1	Keg 8D Wire nails, from G.S.H. by Pass, Lock House repairs,			Req. 19
	✓	1	" 20D " " " " " "		Class 46A Price .03	19
13th	✓	10	Lbs Roof Cement " " "	Mess Keeder House Lock 68	Class 47 Price .04 Per lb.	2)



SCHUYLKILL ICE JAM OVERFLOW[S] ARK DRIVES

An ice gorge fifteen feet high has jammed [i]n Schuylkill river above Fairmount dam, and unless immediate steps are [take]n to break the ice, a sudden thaw will bring a rush of water that [will] demolish the dam and deprive West Philadelphia of its water supp[ly]. effect of the jam on East Park drive, which is covered with thick [ice] d the Falls bridge is shown in the picture.

SCHUYLKILL ICE JAM PUTS WATER SUPPLY IN PERIL

Piles Up Fifteen Feet High, Theatening to Crush Fairmount Dam

N. American 1/14/18

Freezing Blasts Increase Suffering of Fuelless, Causing 2 Deaths

Schools Likely to Be Closed if Cold Continues; Warmer Wave Today

Cold Wave Broken

GRADUAL return to normal temperatures was forecast last night by the weather bureau in Washington, which predicted a rise of from 10 to 20 degrees in all affected states.

Death, suffering, railroad confusion and the endangering of the water supply of West Philadelphia thru an ice jam in the Schuylkill were faced by this city yesterday as the cold aftermath of the great Chicago blizzard swept over the Atlantic states.

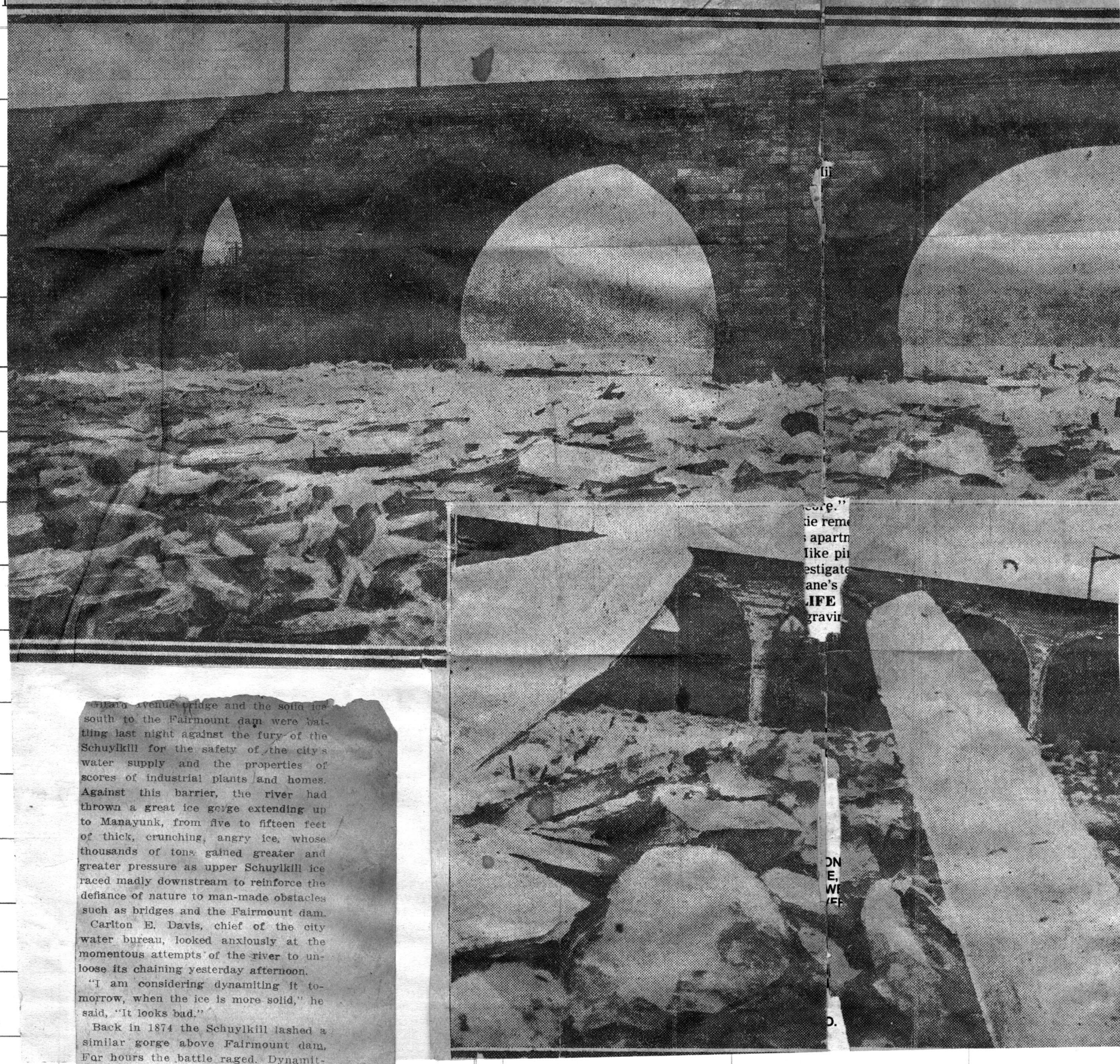
Two persons died from cold exposure during the day. Trains from the west on the Pennsylvania Railroad arrived several hours to twenty-four hours late, but a resumption of the New York to Chicago schedule was made last night.

Suffering about the city in its almost fuelless state was intense, and rigorous steps are urged to alleviate it. Secretary William Dick, of the board of education, admitted that public schools might be forced to close for a time and extend their terms longer in the spring if the cold

Clippings from Ruben Ritter's file

ICE MENACE TO FAIRMOUNT DAM HALTED AS COLD UNITES FLOES

Inquirer 1/16/18



Girard Avenue bridge and the solid ice south to the Fairmount dam were battling last night against the fury of the Schuylkill for the safety of the city's water supply and the properties of scores of industrial plants and homes. Against this barrier, the river had thrown a great ice gorge extending up to Manayunk, from five to fifteen feet of thick, crunching, angry ice, whose thousands of tons gained greater and greater pressure as upper Schuylkill ice raced madly downstream to reinforce the defiance of nature to man-made obstacles such as bridges and the Fairmount dam.

Carlton E. Davis, chief of the city water bureau, looked anxiously at the momentous attempts of the river to unloose its chaining yesterday afternoon.

"I am considering dynamiting it tomorrow, when the ice is more solid," he said, "It looks bad."

Back in 1874 the Schuylkill lashed a similar gorge above Fairmount dam. For hours the battle raged. Dynamiting of the gorge at the dam was ordered by Mayor Stokley and was carried out by the city with the assistance of the Pennsylvania Railroad, whose president, Frank Gowen, urged the measure as a loophole out of a terrible calamity. Old rivermen said yesterday that the present gorge is worse than that of 1874 and more dangerous.

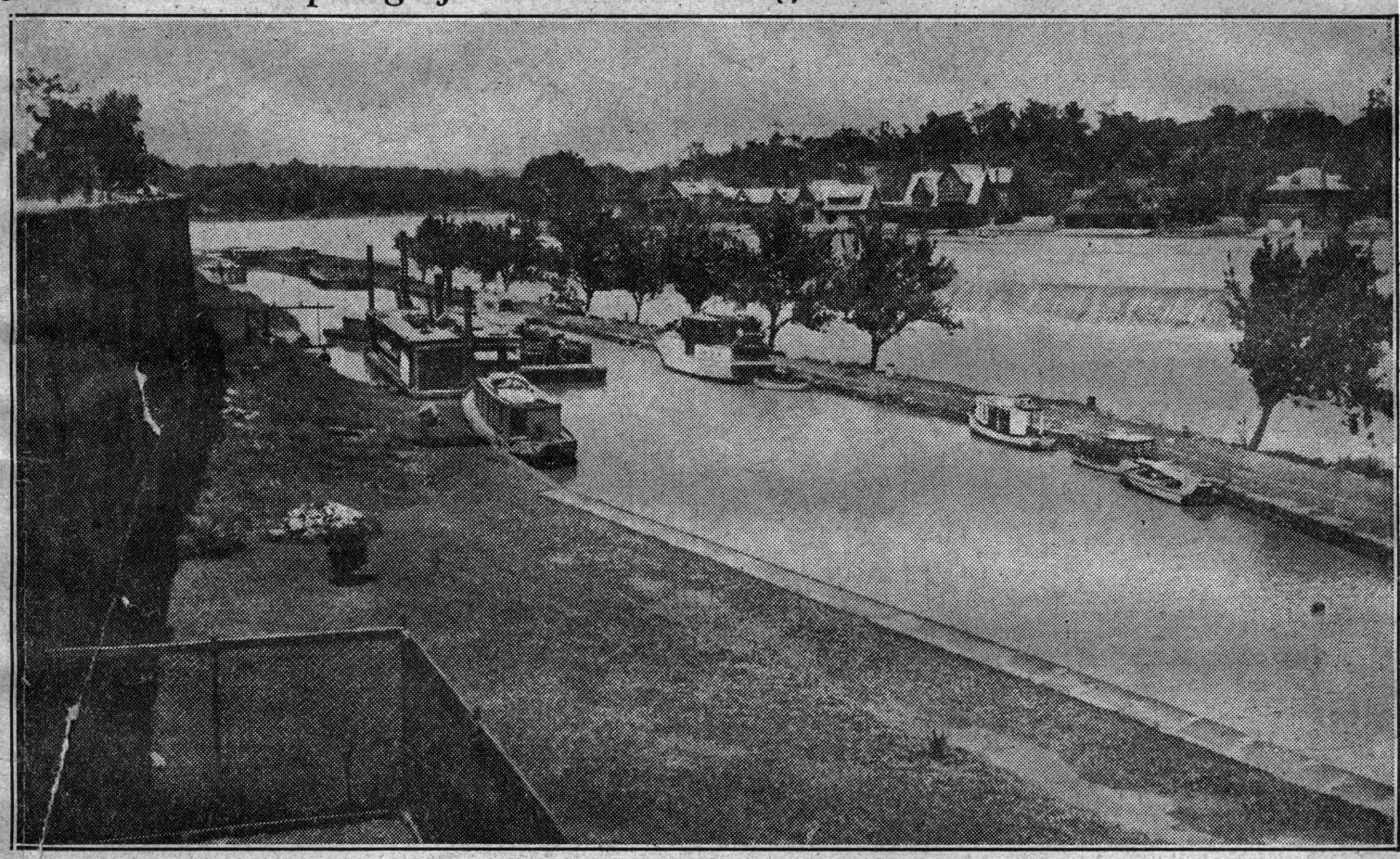
Jam Started Saturday

The swollen Schuylkill began its fierce onslaught on Saturday. With immense cakes of ice from a foot to two feet and a half thick, great logs, stumps and other victims of the upstream, the torrent battered the new coffer-dam constructed by Seeds & Derham, a local contracting firm, for the establishment of a base for the new bridge which the Philadelphia and Reading Railway is to erect over the Schuylkill to replace the old Columbia bridge at Rockland. This coffer-dam had been completed and the contractors were about to pump out its inclosure. It was 120 feet long, 60 feet wide and 18 feet deep.

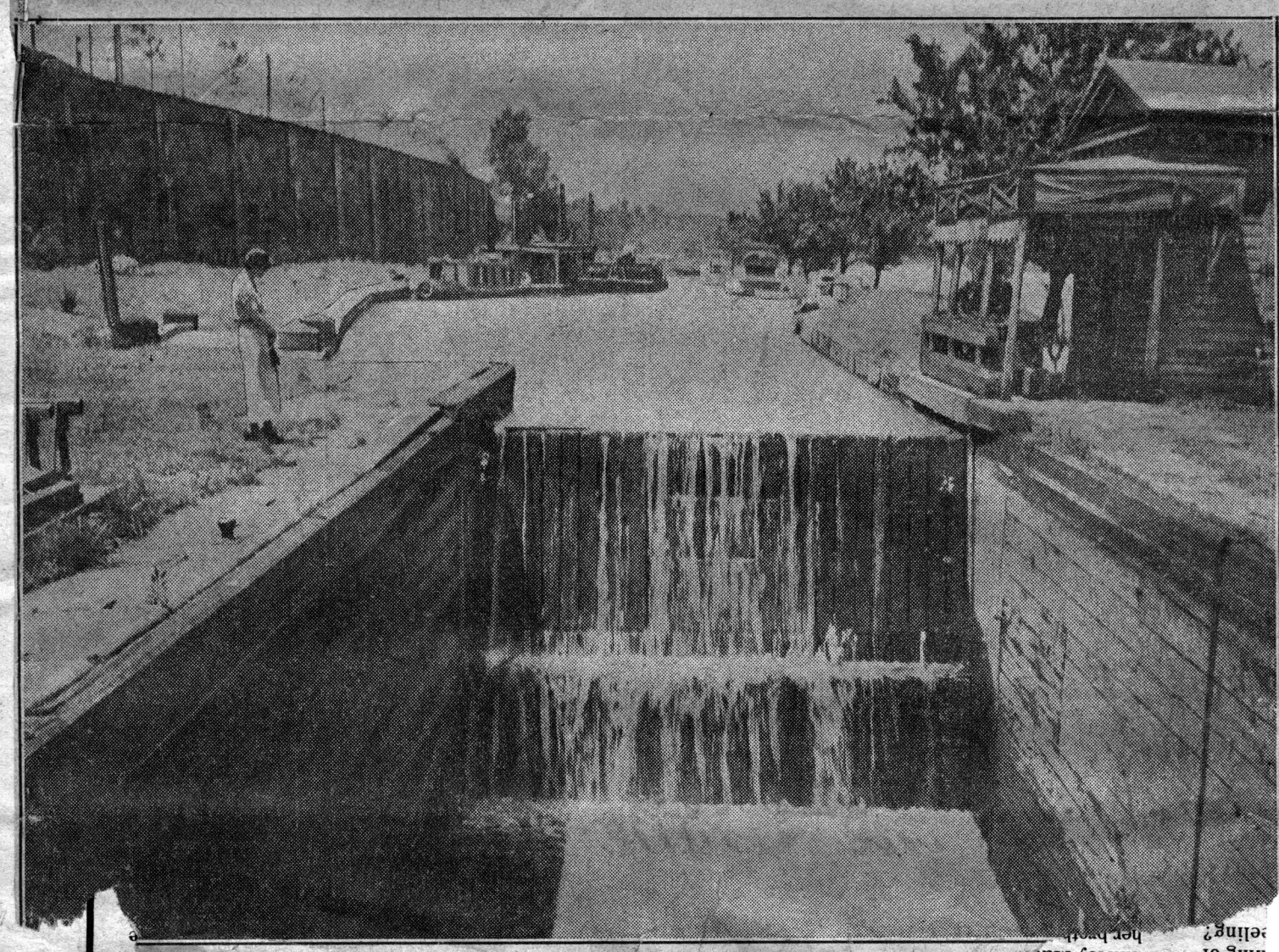
Moored tho it was, with thousands of tons of stone and railroad iron to the

Continued on Page Fifteen

Just above the Spring Garden Street Bridge



Take a Look at Those Ten Pear Trees—As seen from the steps back of the lock tender's house. The camera is pointing across Fairmount Dam to Boathouse Row. At anchor in the canal are the motor boats: Margaret, Neptune, Mary-Ella and Winsagina. Opposite, a dredge, towed by the tug boat "Dolly," has been removing mud and silt from the waterway from Phoenixville to Philadelphia since spring. The small fenced-in enclosure is the lock tender's chicken yard.



House and Spillway—Operated by lock-tender George R. Schuck. It is tucked away and hidden hikers on the West River Drive by a 20-foot wall.

INSTRUCTIONS AT

DATE. No. of.

Unusual Views of the Old Schuylkill Canal

This Ancient Canal Is Still in Use and Being Dredged—Men and boys fish from the banks of the old tow-path where mules pulling coal barges used to run. On the opposite side, on what is called in canal-ese, berm bank, little gardens are planted between the pear trees, tools for which are kept in the small shanty under the tree. Note the Art Museum towering on Fairmount Hill and the city aquarium buildings low along the opposite river bank.

1, NO. 49 Norristown "Times" Feb. 27, '18. M INTERNA

DANGER FROM RIVER NOW PAST, IT'S SAID

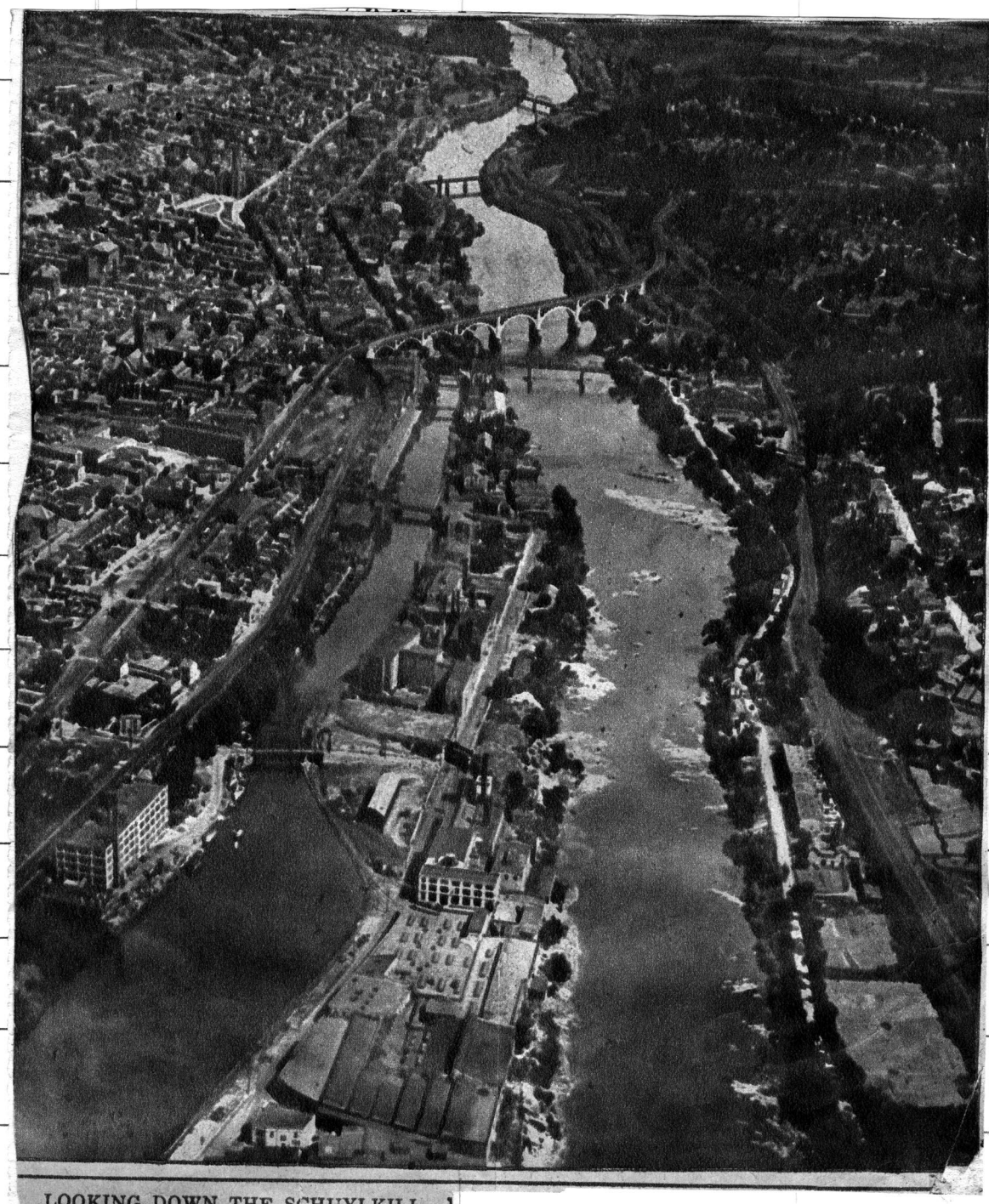
Stream Still High, However; Reading Dam Breaks; What Water Co. Men State

The high water of the Schuylkill is slowly receding, and those who should know say that all danger from this source hereabout is past. They claim that before the end of the week the stream will again be at its normal depth, although it is still nearly six feet higher than usual.

A break in the dam at Reading, yesterday, combined with the high water from the heavy rains of Monday night, was responsible for the swelling of the river to a considerable height yesterday. Much refuse was carried down streams and there were also several boats brought from a distance. Several of the rivermen say they secured some of this craft and are holding it for the owners. While some of the boat houses in this vicinity were slightly damaged, no serious consequences are reported and the industrial establishments along the stream report no ill results whatever.

The water is still rushing over the Swede street dam with great velocity, and it will be several days before the officials of the Norristown Water Company can determine the full extent of the damage done to the breast when the further break came, Monday afternoon, as was stated yesterday. It is feared, however, that this will be of a more serious nature than was first contemplated.

The water company officials announced, this morning, that with the present high water, they would have no trouble in keeping the reservoir well filled and the pumping is being continued night and day. Not until the water reaches normal will they be in a position to say what effect the new break in the dam will have on the borough's water supply. They promise that repairs will be made as soon as practicable.



LOOKING DOWN THE SCHUYLKILL FROM THE AIR AT MANAYUNK. The suburb lies to the left of the picture, being on the north bank of the river. In the center is the new Pennsylvania Bridge. In the right distance is West Laurel Hill Cemetery *Aero Service Corporation*

Reading Eagle - 8/4/22

EVERY D

STATE OFFERS THREE METHODS FOR FLOOD CONTROL IN READING

SUGGESTS ENLARGEMENT OF RIVER CHANNEL OR BUILDING OF CONCRETE WALL OR LEVEE ALONG EAST BANK

In 1919 the Pennsylvania water supply commission sent to Mayor Filbert a report of a river and culm survey of the Schuylkill that had been made by state engineers, the contents of which are of particular interest at this time because of the revival of the subject due to the huge deposits of detritus that clog the channel of the river in and near Reading.

At that time Mayor Filbert acknowledged receipt of the report and later, on request of the city, the state made a topographic survey of the Schuylkill channel at a cost of more than $3,000, and loaned it to the city.

The state has no appropriation for the work of deepening the channel. Such appropriations could be made only by special acts. If the Berks legislators had gotten busy at the time the report was first sent to Reading, four years ago, it is possible they might have procured appropriations from the state to carry on this work.

Thomas J. Lynch, secretary of the state water supply commission, when seen by the Eagle's Harrisburg correspondent, declared that this survey is still available.

Under the caption, "Suggestions for flood control plans for the Schuylkill River at Reading," the river and culm survey that was sent to Mayor Filbert Aug. 26, 1919, covered the subject constructively and exhaustively. Mr. Filbert replied on Sept. 2, 1919. The complete text of that report follows:

DRAINS 900 SQUARE MILES.

"The Schuylkill River, at Reading, has a drainage area of about 900 square miles, consisting largely of mountainous country. The mean annual rainfall is about 45 inches. More or less dependable high water marks have been preserved of the more important floods for more than 100 years.

"During recent years accurate records of flow have been kept, and from a knowledge of the characteristics of the river, estimates have been made of the discharges of the most important floods. The highest on record was that of September, 1850, the discharge of which is estimated to have been 80,000 cubic feet per second. In October, 1869, and on the last of February, 1902, floods occurred which reached within two feet of this extreme stage. The discharge on these occasions is estimated to have been about 70,000 cubic feet per second. The estimates of these early floods are probably much in error, but an examination of the topography of the watershed, and of the storm rainfall characteristics of the region, lead us to believe that a flood might occur at Reading of 90,000 to 100,000 cubic feet per second, but that such floods would be very rare.

EXPERIENCE MIGHT PROVE COSTLY.

"A flood like that of 1902 inundates all or parts of more than 30 city blocks, most of which are closely built up, and also covers many miles of main and side tracks of railroads within the city. A flood two or three feet higher than this, which may occur, would cause a great deal more damage. Quite generally a city in such a situation must actually go through the experience of a great flood before it will take account of its interest and be willing to pay for the necessary protection.

"In working out plans for flood prevention sometimes the problem is very much simplified by the fact that only one method of improvement is possible. In other cases several entirely feasible methods present themselves, any one of which can be followed at an expense that is fully justified.

"Floods on the Schuylkill River at Reading can be controlled by either of two or three methods, and careful and detailed surveys and studies will be required to determine finally which is best and least costly. Any method of flood control will be expensive, and may cost more than would seem at present to be justified by the interests involved.

THE TULPEHOCKEN CASE.

"Control by dams and retarding basins may be dismissed at once as impracticable in this case. Most of the best sites for dams and for storage areas are occupied by railroads. The Tulpehocken Creek, entering the Schuylkill from the west at Reading, has apparently excellent dam sites and storage areas that are not occupied by expensive improvements. This stream, doubtless, can be completely controlled by dams, but its drainage area is only 200 square miles, as compared with 900 square miles for the Schuylkill at Reading, so its control would only partially solve the problem. The control of this one stream by a dam and retarding basin probably would cost more than complete flood control for the city by other methods. Tulpehocken Creek would, however, furnish valuable water supply storage, if it should be needed, for industries in or below Reading. An examination of the map suggests a straightening of the river by cutting off two bends just below Reading. Such a straightening would eliminate the need for four large railroad bridges, but would require two very deep cuts, one of more than 100 feet. They would cost more than protection by other means, and would only partially solve the problem.

GNM

Philadelphia, Monday, October 27, 1930

Eve. Ledger

THE SCHUYLKILL CHANNEL

THE discovery of culm from the coal regions in the dredgings from the channel of the Schuylkill below the Fairmount Dam has led the Mayor to instruct the City Solicitor to ask the Attorney General to take such action as will prevent the coal operators from allowing the culm to get into the river.

Twenty-three years ago an action was brought in court to stop the practice. The coal operators, however, succeeded in making arrangements which at the time kept the culm from the water. The Supreme Court, instead of issuing the order sought, assessed the cost of the action on the operators and kept the case open, so that either party might apply on short notice for such relief as was desired.

That the culm continues to appear in the waters of the river suggests that further relief should be sought. The culm shoal at Norristown is said to be moving downstream at the rate of three miles a year. This means that it will not be many years before it reaches the Fairmount Dam and begins to be washed below the dam into the channel that the city must dredge in fulfillment of an agreement with the Federal Government. The Attorney General is expected to take such action as the facts justify.

Public Ledger

HURSDAY MORNING, APRIL 21, 1921

THE FAIRMOUNT DAM IS SAFE, CAVEN'S REPLY TO REPORTS

Director Says There Is No Danger of Break, Leaving West Philadelphia Without Water—City, However, Is to Plan Modern Concrete Structure

Frank H. Caven, Director of Public Works, in a statement yesterday allayed alarming reports that the Fairmount Dam in the Schuylkill River immediately above Spring Garden street bridge is in danger of breaking and leaving all of West Philadelphia without any water.

Director Caven said that while it is true the city has made repairs to the dam from time to time, the engineers who have examined the structure declare there is no danger of it breaking through.

"It is the intention of the city some day to replace the present structure with a modern concrete dam," the Director said. "The department is about to make some borings and we are preparing to make plans for a new dam but it is not with any idea there is the slightest danger of the present dam breaking."

The Director's statement was in reply to an article published in the monthly bulletin of the Civic Club, in which Theodore Justice, a member of the Fairmount Park Commission, stated the Water Bureau was in need of $750,000 to build a concrete dam.

"The importance of a new dam will be realized," the article said, "when you consider that if this dam should break away, as it is liable to do at any time, West Philadelphia would be entirely without water. There is no way of supplying it with water from the east side of the river. Anyone can imagine the serious situation there to possibly more than a fourth of the population who are dependent entirely on water obtained from the Schuylkill River."

Other officials of the Public Works Department said the question of the safety of Fairmount dam was raised years ago.

Mr. Justice at the last meeting of the Park Commission asked whether the safety of the dam might not be affected if the Park Commission was to remove the accumulation of river silt which has backed up against the dam breast. Alan Corson, the chief engineer of the commission, explained that the safety of the dam would not be impaired.

Director Caven yesterday coincided with that opinion. He explained that if the accumulations of silt were removed it would probably lessen the strain on the dam.

Ed. Record 2/2/20

Neglected Waterways.

Governor Smith, of New York, who has recommended to its Legislature that $20,000,000 should be expended in completing the new barge canal and building grain elevators, has expressed his disappointment at the very slight use made of that most expensive waterway, and says that in a recent trip he saw but a half-dozen boats on the 90 miles of the Champlain section. This is an experience that can be duplicated on nearly any still surviving canal or navigable river, and is one of the curiosities of American life. Why do not our people make greater use of the interior waterways that have cost so much and on which bulky freight can be transported at considerably lower freight charges than on the railroads, and often in less time? The neglect of the Schuylkill Canal is a case in point.

It was only last year that, after the maintenance of a day line on the Chesapeake and Delaware Canal for over half a century between Philadelphia and Baltimore, it was abandoned for lack of traffic. The same fate befell the long-established Clyde Line between this city and New York. The upper Delaware, which formerly supplied business enough for two rival steamboat companies, now has only a summer passenger service, notwithstanding the unusual number of good-sized towns that line the stream. There is no longer any regular water communication for passengers between Philadelphia and the Delaware and New Jersey communities below Wilmington.

Foreign countries find that it is still profitable to utilize canals for the transportation of coarse and bulky freight, such as coal, wood, grain, stone, etc. It is only in America that this aversion to shipping by water seems to exist. This prejudice has laid a heavy burden upon the taxpayers of New York, who have expended much more than $100,000,000 on the barge canal. No wonder Governor Smith is disappointed. Most people are who compare the existing means of water transportation with the very trifling advantage that is taken of them.

CANAL BOOMERS TO MEET IN PHOENIXVILLE MARCH 20

J. W. H. Glass, executive chairman of the Schuylkill Canal Improvement Association, has called the next conference of cities' and towns' delegates, members of the association, for Phoenixville on Saturday, March 20.

The Royersford Businessmen's Association has endorsed the canal improvement project. Eagle 2/13/20

CULM REMEDY UP TO STATE, SAYS MAYOR

SAYS TROUBLE HAS ITS ORIGIN UP STREAM

Rdg Eagle 7/21/27

Mayor Stauffer said that no formal complaint had been made to the state water supply commission regarding the culm deposits in the Schuylkill River along Reading.

"The matter will be discussed in a Council conference before any official request is sent to Harrisburg for advice on the subject," he remarked.

The mayor feels that the state should provide a remedy higher up the stream where the trouble originates, rather than to expect the city to pay for removing the deposits.

"The present obstruction is especially noticeable below the new Bingaman street bridge, where the river is wider than at any other place about Reading," the official continued, "and there is no danger at the present time because the summer flow of water is small in comparison with the spring freshets."

Recalls Inspection Trip.

The mayor recalled an inspection trip which he made as a councilman along the Schuylkill about three years ago, from the southern city limits to the northern end at Flussheim, in company with Thomas J. Lynch, secretary of the state water supply commission, and one of its engineers.

"The inspection along the lower section below Penn street was easily accomplished," he said. "It was near the northern city limits, especially along the western bank, that we found soft spots where culm had collected over the low-lying portions. It made a marsh-like effect, which would not support the weight of one person's body.

"On several occasions members of the party had narrow escapes from falling into the soft culm deposits which, on the surface, had the appearance of being solid land. The inspection was for the purpose of determining the stream width deemed necessary by the state engineer to carry off the flood waters of the river area without overflowing other property."

320-Foot Channel Fixed.

According to the mayor's recollection, the state commission afterward fixed a compulsory width of 320 feet for the Schuylkill River channel along Reading. Following the inspection an order was issued by the commission to the Pennsylvania Railroad Co., requiring that it dig away a projecting land area at the railroad bridge crossing the Schuylkill opposite the foot of Spruce street. A large portion of the eastern bank, he said, was cut away to comply with the state's orders. At that time, the mayor added, the culm was not so evident in that section, although it had started to pile up at a few places.

A special dispatch from Harrisburg, printed in Thursday's Eagle, stated that Secretary Lynch declared that some time ago the commission sent a report to the city of Reading, informing Council what would have to be done for the protection of the river channel.

Search for Communication.

City Engineer Ulrich said that about four years ago he and Mayor Filbert made an inspection of the river and that the latter subsequently wrote to the state commission about the culm beds that were forming at various points. An engineer was sent here, Mr. Ulrich stated, and later recommendations were received. He could not recall what they were. The communication could not be found, but a search is being made for it.

MAY RE-OPEN CANAL

Navagation Co. Clearing Out Channel to Resume Traffic

The Schuylkill Navigation Co. has taken steps toward the reopening of the canal which parallels the Schuylkill river from Port Clinton to Philadelphia.

The company has sent a number of dredges along the water course for the purpose of removing the obstacles to traffic, and their activity has caused some speculation as to the plans of the navigation company.

While there has practicallly been no business on the waterway for several years, the recent activity on the part of commercial interests in the communities touched by the canal looking towards the resumption of water transportation, is believed to have prompted the present movement.

Incidentally, it is learned that an official of the company, a few days ago, made an inspection of conditions at Conshohcoken, in connection with the building of the new river bridge at that point. One of the piers of the structure rests on the east side of the canal bank and as a result the waterway at that point is narrowed.

CONSI

WHOM.

NSTRUCTIONS AT

TO AID CANAL REVIVAL

3/30/21

SCHUYLKILL WATERWAY BOOSTER AT HARRISBURG.

Harrisburg, March 30 (Special).—J. W. H. Glass, Reading manufacturer, who is interested in the reopening of the old Schuylkill Canal for the transportation of freight, conferred with James H. Craig, deputy secretary of internal affairs, who is interested in the subject of waterways. Secretary Craig and Mr. Glass have attended a number of waterways conventions together.

While here Mr. Glass consulted senators and members of the House concerning the resolution which it is planned to introduce next week. Senator James E. Norton will probably be asked to introduce the resolution, which will urge Congress to take favorable action on canal legislation now pending.

Mr. Glass will call a conference of the canal advocates to draft the resolution. No appropriation will be asked of the state. A bill is now before Congress asking an appropriation for the revival of canals, and if it receives favorable consideration a future session of the Assembly may be asked to appropriate money to aid the project.

"What we want of the Assembly now is not money, but its moral support," said Mr. Glass.

LEVEE HARDLY FEASIBLE.

"A levee along the east bank of the river is not feasible unless the bed of the Schuylkill canal can be occupied because the canal and railroad tracks are too close to the river to allow levee construction between them. If the canal can be entirely abandoned, complete protection could be afforded the city by this means at a cost of perhaps half a million dollars, except that back water at the lower end might not be entirely prevented. If the canal cannot be entirely abandoned, it might be carried through the city in the bed of the river by the construction of two low dams fitted with locks, thus releasing the present canal for a levee location.

"The narrow strip of land between the canal and the river, while not wide enough for a levee, probably would be a suitable location for a concrete wall. The uncertainty in the cost of such a wall, aside from present fluctuations of construction costs in general, is because the character of the foundation is unknown, as are also the complications which would be encountered in occupying part of the canal right of way. Such a concrete wall would require a flood gate where the canal leaves the river in the upper part of the city, and probably another at the lower end of the city where the canal enters the river. The cost of flood protection by means of such a wall might be three-quarters of a million dollars, but dependable estimates would require very careful investigation.

MAY COST A MILLION.

"Along part of the east bank of the river through the city there is room to construct a levee without interfering with canal or railroads. The improvement might consist of an earth levee where there is room and of a concrete wall where the canal is very close to the river bank. Probably a limited amount of channel improvement would enable such a combined improvement to be carried out with further economies.

"The comparative economy of these different methods can be determined only by comparisons following careful examinations of foundation material for concrete walls, of the possibility of disposing of excavated earth, of the possibility of displacing or moving the canal, of the cost of right of way, and of other items. It is probable that complete protection by any method will cost not less than a half million dollars, and it is quite probable, judging from a preliminary examination, that complete protection can be secured for not to exceed a million dollars."

FEASIBLE METHODS.

"Methods of flood control which appear to be feasible from an engineering viewpoint are:

"The enlargement of the river channel by excavation.

"The construction of a concrete wall along the east bank of the river.

"The construction of a levee along the east bank.

"A combination of the three methods mentioned above.

"The enlargement of the river by excavating the channel would require the removal of perhaps 1,000,000 cubic yards of material in order to secure full protection. The most feasible method for doing this work probably would be excavation by means of dragline machines of the revolving type, loading the material on cars and transporting it to some place where it could be dumped. The cost would depend largely upon the difficulty of finding suitable places for wasting the excavated material, upon the character of the soil or rock excavated, and upon interference with existing improvements. These and general construction costs are so difficult to determine in this case that the cost per yard cannot be estimated without careful investigation. It probably would be between 60 cents and a dollar per cubic yard. Among objections to this plan would be the possible high cost of maintaining the excavated channel due to silting or caving of banks, the possibility of undermining bridge foundations and possible interference with existing dams. One important advantage of protection by channel excavation is the fact that local drainage would not be interrupted, and that a partial improvement might be carried out without danger of failure such as would follow the overtopping of levees.

Y, DECEMBER 8, 1919.

ORGANIZE TO REVIVE CANAL TO TIDEWATER

READING AND POTTSVILLE MEN AT WASHINGTON BOOST PROJECT

Washington, Dec. 8 (Special).—At a meeting here today of delegates from communities along the Schuylkill River attending the inland waterways convention, a permanent organization, to be known as the Schuylkill Canal Improvement Association, was formed and a resolution adopted and presented to the rivers and harbors committee of the House of Representatives, urging the opening of the Schuylkill canal from Pottsville to tidewater for the hauling of freight, particularly of coal. Officers of the new association elected were J. H. Zerbey, Pottsville, president; J. W. H. Glass, Reading, first vice president; E. A. Berkley, Phoenixville, second vice president; and W. L. Binder, Pottstown, secretary-treasurer.

Mayor-elect Stauffer, of Reading, attended the meeting. It was decided that when the delegates return to Pennsylvania, organization of the associations shall be continued in all the communities interested. The resolution presented to the House committee reads as follows:

"To the committee on rivers and harbors, House Office Building, Washington, gentlemen:

"Whereas, Recognizing the importance of opening up the Schuylkill canal from Pottsville to tidewater for the hauling of freight and particularly coal, affording a direct route of transportation from the mines to the barges of our outgoing vessels, thereby eliminating the rehandling necessitated by transportation by rail; and

IN TIME OF WAR OR PEACE.

"Whereas by reason of transportation through the proposed improved Schuylkill Canal the congestion on the Pennsylvania and the Reading Railways would be relieved, and

"Whereas, The late war has taught us the necessity of increased and varied modes of transportation, and

"Whereas, The proposed improved Schuylkill Canal, by reason of its locality and inland position affords safety to its cargoes and immunity from attack by enemy vessels should they by perchance enter our waters, and

"Whereas, The transportation of said cargoes could be handled proportionately with considerable less manpower and expense than transportation by rail or any other means of transportation, thereby affording considerable saving of monies and permitting the use of manpower thus saved toward other important and essential purposes, and

"Whereas, in peace times, by reason of low cost of transportation through the said Schuylkill Canal, a reduction could be afforded on the price of fuel and other essentials,

"Therefore, be it resolved that the Schuylkill Canal Improvement Association do hereby indorse the proposed improvement of the Schuylkill Canal and beseech your honorable body to recommend favorably the passage of H. R. No. 6852, now or about to be presented, and thus serve the interests of our government, the United States of America."

INVENTION SAVES PULVERIZED COAL

Holland Method Expected to Save Companies Vast Sums in Reclaiming Fuel

State Also Will Benefit by Having Rivers Free of Dirt and Sediment

Special to The Inquirer.

SCRANTON, Pa., Aug. 16.—A process, which it is believed will increase the earnings of the coal companies of the anthracite region millions of dollars yearly, and which it is thought will also be a benefit to the State of Pennsylvania, was successfully tested today at the Old Forge Colliery of the Pennsylvania Coal Company, at Old Forge, near this city.

The process, invented by Charles E. Holland, of New York, not only recovers and reclaims coal from waters that go into the creeks in draining coal mining districts, but it also aids in clarifying rivers and streams and prevents their pollution from the colliery source.

One of the most important features of the Holland process is that the water flowing from each colliery will be clarified or in other words, it is discharged to the stream from the colliery fully clear. The water is free from all solids that are held in suspension.

For years the streams of Pennsylvania have been polluted and filled with water draining the coal mining companies' properties and by the Holland method it is claimed that the water pouring out into these streams will be clarified and benefit the State and at the state time it will save the pulverized coal that has been going out in the wash water from the mines.

The tests of the Holland patented process were made Monday and today and finished this evening. These tests, which proved most satisfactory, were made in the presence of Francis E. Daniels, assistant engineer of the Pennsylvania Department of Health, and W. L. Long, of Division of Electric Chemistry of the Pennsylvania Department of Health, with headquarters at Harrisburg, and officials of the Pennsylvania Coal Company.

Following the tests, which continued for two days, the State engineers started back for Harrisburg, where they are to make a report immediately to Dr. Edward Martin, head of the State Health Department, who in turn is to lay the matter before Governor Sproul.

Because of the success of the tests made under the Holland patents for the precipitating of coal mines by the electrolytic invention, it is expected that coal companies throughout the anthracite belt will soon begin installing the Holland apparatus.

PLAN NEW FAIRMOUNT DAM

Structure of Concrete Will Replace Dangerous Wooden Frame.

A contract has been awarded for 10 borings for Fairmount Dam, Carleton E. Davis, chief of the Water Bureau, announced on Saturday. This is the first step looking toward the construction of a permanent masonry dam across the Schuylkill River at this point.

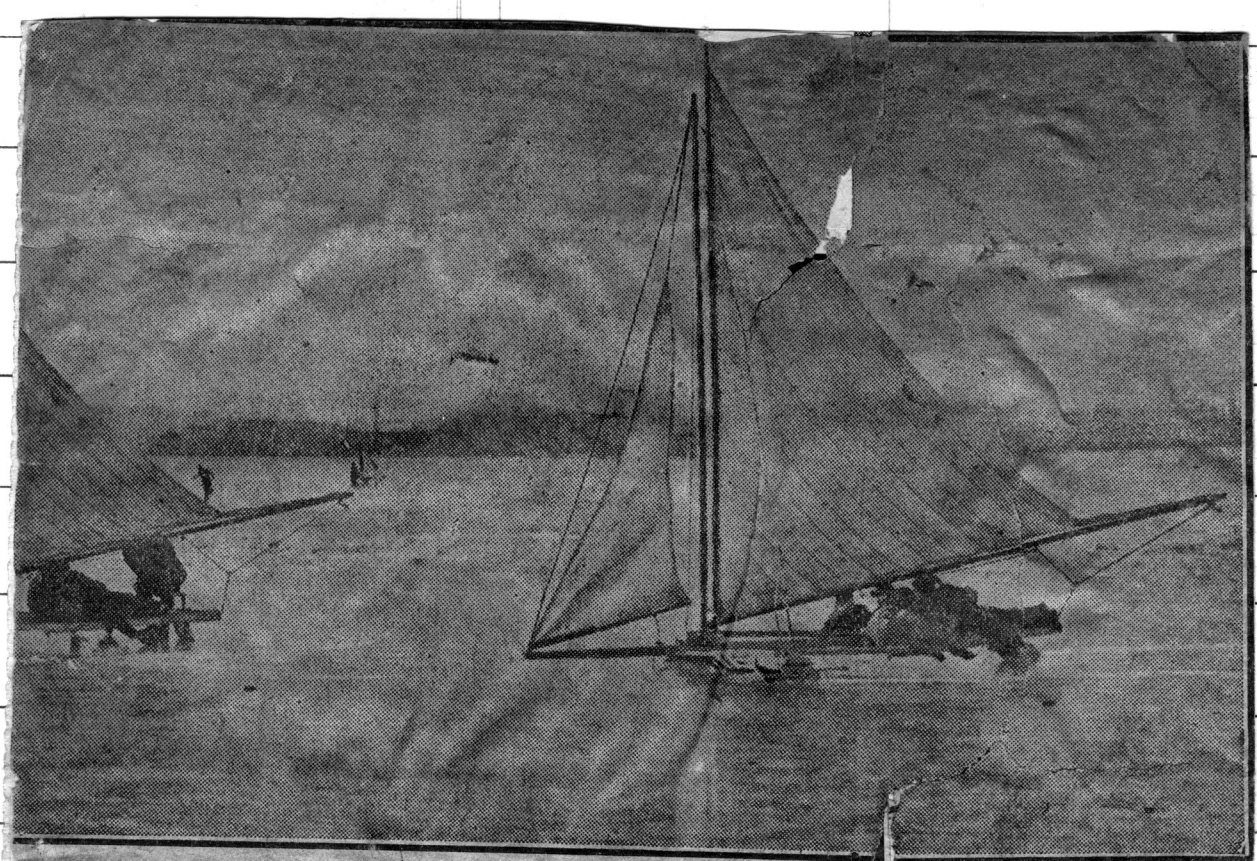
Fairmount Dam creates the pool from which the entire water supply of West Philadelphia is drawn and a large portion of the supply for the central part of the city west of Broad street and south of Hunting Park avenue. Any accident to Fairmount Dam or any damage to the structure from ice or floods might result in the lowering of the water in Fairmount pool to such an extent that the pumping stations located along its banks would be put out of commission and the districts depending upon these pumping stations for their supply would be out of water.

Before designs for a masonry dam can be made, or a safe estimate of the cost of the structure determined, it is necessary to know definitely the elevation at which ledge rock lies in the bed of the river, and the character and nature of this rock. The test borings about to be made are what are technically termed "core borings;" that is, drills used in penetrating the rock to cut out a ring and allow the removal of the circular interior core of the actual rock. This core when lifted out shows the nature of the rock, whether it is sound or disintegrated, whether it has seams through which water may penetrate, or whether it is solid and water-tight.

The permanent masonry dam will be constructed so as to prevent leakage through the rock beneath the dam as well as to prevent leakage through the actual structure of the dam itself. At the present time the existing timber crib rock-fill dam at Fairmount is leaking excessively. Estimates have been made that not less than 50,000,000 gallons a day of water are escaping between the logs and through the loose rock-filling of the existing old structure. In times of excessive drought such as occurred in May and June last, the loss of this amount of water a day is serious, and if allowed to continue or increase, might create a shortage at the pumping stations.

Fairmount Dam has an interesting history. The original dam at the present site was built about 1821. This dam lasted over 20 years, and in 1842 and 1843 it was necessary to rebuild the dam from low tide up. After another period of about 20 years extensive repairs were necessary, and in 1865 a reinforcing crib of logs and rock was sunk downstream from the first structure. This was a temporary expedient only, and in 1872 an entire new dam was built downstream from the 1820 dam. This downstream dam, built in 1872, is the one that is seen at the present time. The remains of the original 1820 dam lie submerged upstream in the Fairmount pool.

A great flood in 1904 washed away a part of this 1872 dam and the entire structure was practically rebuilt in 1905. The dam was again damaged from ice and high water in the winter of 1917 and 1918, and in the fall of 1918 additional extensions and repa[illegible]



ICE YACHTS WHICH RACED ON THE DELAWARE AT RIVERTON

r for winter sports on the Delaware. Among those who were out on ice boats y esterday were Mrs. Biddle Frishmuth, illiam Hendrickson, Brinton Thomas, Biddle Frishmuth, John Douglas Clarke and Ralston Biddle. The protracted cold vinter sport than ever before, and the upper Delaware was "alive" with devotees.

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CANAL PLANS DON'T APPEAL MUCH HERE

Localites Could Not Make Much Use of Water Transportation

Norristown Times 10/12/20

Conshohocken firms having a great amount of freight shipment to and from industries in this borough, are not much interested in the efforts being made by representatives of the committee promoting the Schuylkill canal navigation looking towards the guarantee of support essential to assure the undertaking attending the placing of this waterway again in operation for traffic.

The Schuylkill Navigation Committee, in testing the sentiment of the local shippers of bulky freight, found that the firms here are, in the main, handling a line that must be placed directly on cars which can be taken as near to the place of destination as is possible. They would have to go to more expense, in most instances, in order to make use of the boats for such freight as is destined for Philadelphia.

The only encouragement the local firms can give to the proposed freight traffic over the canal is in the matter of receiving anthracite coal, whose use is limited. The big mills use the bituminous product, which comes from points beyond the reach of the headwaters of the canal.

To Conshohockenites, the main source of interest in the operation of the canal, it was pointed out to the committee is the mercantile trade.

Merchants sounded on the matter stated that, while they were willing to co-operate as far as possoble in having shipments from up-river points scheduled by way of the canal transportation service if re-established, there is but a limited amount of such freight that could be diverted even at the busiest season.

HOPE TO INTEREST U. S. IN CNNAL

(Continued from First Page)

vides for the construction and improvement of waterways, for the purpose of relieving, increasing, and improving the transportation facilities of the nation, as well as to give employment to a large n ber of our discchcarged soldiers J others.

The ropriation called for is $100 000 annually for the next years and provides for appr iations on projects already approved by U. S. Engineers.

This appropriation includes a large number of river improvements, including Schuylkill Navigation Canal $1,400,000 annually for five years; which canal extends from Pottsville in the coal region 104 miles to the junction of the Schuylkill and Delaware rivers at Philadelphia.

The bill calls for the handling of these improvements by U. S. Engineers and the Secretary of War, and that all these waterways shall be under control of the War Department.

It will be seen by the above the the Schuylkill Canal project is at least on the map, and it is evident that if the people of this section will give the matter proper support that the Government will eventually be induced to provide waterways transportation facility between the anthracite coal mines and the main arteries of the Intra Coastal Waterways system that will be connected and in operation in the no distant future between the New England States and the South and the West parelleling the oceans so as to give the U. S. Navy inside water transportation in the event of war.

The Schuylkill Canal and the Lehigh Canal projects have the endorsement of the state authorities, and the hearty co-operation of the officials of the larger canal projects who realize how inadequate the railroad transportation systems were for the transportation of coal during the recent war, without reckoning the great commercial advantages that would accrue to the towns and industries connected therewith.

All communcations bearing on Schuylkill Canal Improvement matters should be addressed to J. W. H. Glass, Chairman of the

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Norristown (Daily) Times, March 28, 1921.

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HOPE TO INTEREST U. S. IN CANAL

Efforts of Schuylkill Improvement Assoc'n Men Along This Line

ADVOCATES IN CONGRESS

To the Editor of The Times:

The following information just received from Washington, showing the present status of the efforts of the Schuylkill Canal Improvement Association to have the C. S. Government take charge of the rebuilding, rehabilitation and reopening of the Schulykill Canal for effective commerical and Government operation in the distant future, may be of interest to your many readers:

The effort of the Schuylkill Canal Improvement Association whose active members largely come from Conshohocken, Norristown, Phoenixville, Royersford, Pottstown, Reading, Leesport, Hamburg, Schulykll Haven and Pottsville, for the purpose of bringing about the Government control and reopening of the Schuylkill Canal, between Pottsville and Philadelphia, has resulted in having the Schuylkill Canal Improvements included in the Inland Waterways new bill that is to go before Congress this year.

The official title is the Mississippi to Atlantic Inland Waterways project, and the bill pro-

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Executive Committee, Reading, Pa.; W. K. Binder, Secretary, Pottstown, Pa.; Gilbert Rodman Fox, Esq., Solicitor, Norristown; E. A. Barkley, Treasurer Phoenixville, and J. H. Zerbey, President, Pottsville, Pa.

This project has the hearty endorsement of Congressman Butler of Chester, Congressman Watson of the Norristown District, the Congressman from the Reading-Lehigh District and Congressman Reber of the Schuylkill District.

GILBERT R. FOX.

Norristown, March 28, 1921.

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MINE WASTE, EXPERT SAYS, POLLUTES STATE STREAMS

Heavy Losses Caused by Acids Carried Into the Waters—Great Numbers of Fish Destroyed; Navigation Hampered; Harm Done at All Points

Public Ledger 3-4-21.

Gross pollution of the streams of Pennsylvania, including the Schuylkill, were charged last night to the industries of the state by C. A. Emerson, Jr., of Harrisburg, chief engineer of the State Department of Health. To return the waterways to a condition of reasonable cleanliness, the speaker said, would be a task of great proportions

Mr. Emerson spoke in the Franklin Institute.

"The most serious source of stream pollution in Pennsylvania is that due to the discharge of coal-mine drainage," Mr. Emerson said.

"It has been estimated that more than 850,000,000 gallons of water are pumped each day from anthracite mines and 600,000,000 gallons daily from bituminous mines. The total volume of this mine waste is about four times the volume of water furnished each day by the Philadelphia water works. The total quantity of free acid and acid salts carried by those mine wastes and by the discharge from the washeries has been estimated at more than 4000 tons each day."

Mr. Emerson said that some of the results of the waste from the mine fields were the blocking of sewer outlets and the increasing of flood damage, destruction of fish life and increasing the hardness of the water, and thereby adding to the expense of maintaining at least ninety-six water works in the state. All this has increased the cost of navigation and industries in the Pittsburgh district by $10,000,000 annually.

No exact figures are available of the tonnage of the coal discharged into streams flowing from the anthracite regions, Mr. Emerson said, but the approximate figures, he said, are startling.

"The excess in coal taken from the ground over that marketed in the last sixty years has been estimated to be more than 500,000,000 tons," said the speaker. "That excess was allowed either to escape into the streams or was placed in great storage, or culm banks near the mines. As the contents of the culm banks is believed to have been approximately 125 000,000 tons, we are forced to consider that the difference between these figures, or 375,000,000 tons, represents the quantity of coal which has escaped into the streams from the mine fields. It is not a complete economic loss, as much of the coal has been deposited along the banks of streams and has in turn been reclaimed."

The Morris Canal

December 1, 1922.

Final Disposition of New Jersey's Old Time Enterprise.

REPORTED settlement of the Morris Canal question will remove from New Jersey politics a cause of scandal and agitation which has been chronic for a generation. The terms wrung from the Lehigh Valley Railroad by the commission created by last spring's Legislature are so favorable, compared with previous tenders, that there will be general acquiescence in the compromise, which is binding on the State without legislative or Executive confirmation.

The railroad company, which heretofore maintained that its leasehold, running for one hundred years from 1874, was actually in perpetuity, has abandoned that claim. In lieu of the reversionary rights to the entire property in 1974, the State gets real estate, including the canal bed from Newark to Phillipsburg and a portion of the terminal property in Jersey City and Bayonne, water rights and cash to the total estimated value of $7,640,000, while the company secures title to about 700 feet of valuable water front at Paulus Hook and a strip of the route to Phillipsburg.

The bargain is alike a good one for the State, which did not venture a cent in the construction of the canal, almost a century ago, and for the railroad, which, while winning a considerable part of the realty it prizes, also gets rid of an annual deficit of $175,000, incurred in upkeep. Unused throughout the greater part of its length for forty years, the obliteration of the ditch will not be felt, and the compromise will doubtless meet objection only among those who prefer two birds in the bush to one in the hand.

The survey of the Morris Canal was authorized by an act of the New Jersey Legislature of 1822, and active construction was begun three years later. By August, 1831, it was completed from Phillipsburg to the Passaic river, in Newark, at a cost of about $2,000,000, although the original estimate was $871,000, public works having then the same habit of expansion as at the present time. Before business could be developed to a profitable basis, the Delaware and Raritan Canal came and diverted its best paying tonnage, and doomed it to its later abandonment.

MORRIS CANAL GOES BACK

Agreement for Return to State Is Signed After 24 Years' Strife.

Jersey City, N. J., Dec. 1.—The signing of the Morris Canal agreement by the Canal Commission and President Loomis, of the Lehigh Valley Railroad, today marked the close of a 24 year fight between the State and the railroad on the abandonment of the canal.

Three copies of the agreement were signed. One will be deposited in the archives of the State Department of Conservation at Trenton, one will be retained by the commission and the third goes to the railroad. The copy of the agreement which will be filed in Trenton will be delivered to the department by Jerome T. Congleton, corporation counsel of Newark; D. G. Baird, secretary of the Lehigh Valley Railroad and the Morris Canal and Banking Company, and Louis Focht, a member of the canal commission.

THE FUTURE OF THE CANAL

Rdg. Eagle 1/22/20

MATTER CONSIDERED AT CONVENTION HERE

A number of plans for future activities, to cover a broader scope than was at first planned, were discussed at the closing sessions of the meeting of the Schuylkill Canal Improvement Association held at The Berkshire.

The afternoon was given over mainly to talks by delegates on matters pertaining to plans that could be followed in restoring the canal to navigation, trade benefits derived from inland waterways conducted along businesslike lines, parts that could be played by developed canals in reducing the high cost of living, engineering projects as they affect canal construction, legislation, etc.

NEXT SESSION MARCH 22.

It was decided to hold the next meeting at Phoenixville on Monday, March 22. E. A. Barkley and William Ellis, Phoenixville, and J. W. H. Glass, Reading, were appointed a convention committee to arrange the plans. W. L. Binder was appointed secretary of a committee on resolutions, calling on the authorities at Washington for the purpose of enlisting aid from the government for the proposed plans of rebuilding the canal.

J. H. Zerbey, of Pottsville, presided. Messrs. Glass, Zerbey and Binder were appointed a publicity committee.

An open forum was held in the evening, followed by a dinner at 6 o'clock. Mr. Zerbey introduced the speakers. The discussions were varied and touched on almost every angle of the subject.

ADMITS HE IS A "CRANK."

"The high cost of living which is being felt nowadays is made up largely of the high cost of transportation," said Burd S. Patterson, of Pittsburgh, who, as he stated, prides himself as being a "crank" for years on all sorts of canal projects. Mr. Patterson furnished interesting data concerning the amount of tonnage carried over inland waterways during the early canal days compared to the present. He said that living costs would not show much of a drop until more adequate transportation facilities are fostered. He furnished proof that more than $10,000,000 in freight charges were saved last year by resorting to traffic on the Monongahela River canal. He gave interesting historical facts concerning the Schuylkill Navigation Co. since it was chartered in 1815.

A CO-OPERATIVE MATTER.

Mayor Stauffer thought that the project of rebuilding the canal should be regarded in a co-operative light and not as one to be treated as a controversy with the railroads. He said he was convinced that the railroads in the Schuylkill Valley have now reached such a point of congestion that only a broad reconstruction policy will bring about better transportation facilities. He said: "The association should follow a policy of reconstruction in order to make the canal one of the leading cargo-carrying waterways in this part of the country." He stated it was perfectly logical on the part of those backing the project to look for support from every businessman in those communities which would be affected by the proposed canal improvements.

CAUSE FOR REPROACH.

"The railroads are in such a state now that they will never again be able to meet the transportation problems. The methods of many of them during the past have brought public reproach upon them." The foregoing were among some of the assertions made by James H. Craig, secretary of internal affairs, Harrisburg, in explaining why the reopening and building of canals should be regarded seriously. Many railroads he declared have little room for expansion now, as they are unable to realize enough from their rates to conduct their lines profitably. He agreed with Mr. Stauffer that there was no reason to antagonize the railroads while pushing the waterways project. He said:

TIME TO LOOK AHEAD.

"The time has arrived when we should awake and agitate waterway improvements. Pennsylvanians should cast their eyes on the future mainly for the benefit of the coming generations, who would regard our improved resources as most valuable legacies."

Mr. Zerbey remarked that the project was not for those interested in personal graft. "We have no axes to grind, as we are all actuated by one motive, the improvement of the canal for everyone," he remarked.

E. A. Barkley, of Phoenixville, second vice president of the association, told of the difficulties experienced in coaling the water works at Phoenixville since the Reading Railway Co. abandoned the shipment of coal by canal.

J. W. Moyer, of Pottsville, went into details of the number of physical obstacles to be overcome in rebuilding the canal. "If we want a canal we must have a modern one," he said. He said the rebuilding of the waterway would mean much in facilitating shipments of coal to the South. The boats, he said, could act as cargo carriers both ways, going south as coal carriers and returning lumber-laden.

SPEAKER DIFFERS.

Wellington M. Bertolet, city solicitor, differed with Mr. Moyer to some extent. He said he did not believe that much could be saved by transporting coal alone south by water, as many of the southern states are small consumers of anthracite. "We all want a canal first, if it is practical as an engineering proposition, and second, if it is an economic proposition. History has shown us that canals have died when railroads were developing." He suggested that a complete engineering survey be made in order to ascertain physical obstacles to be overcome, the cost, etc., before deciding on permanent plans for rebuilding the canal.

Remarks were made by W. U. Barr, Jere H. Barr and H. Y. Stoner, this city; G. W. Lehman, Harrisburg, and others.

A letter was read from Congressman Dewalt endorsing the movement.

THOSE PRESENT.

Among those who played an active part in the affair were:

James H. Craig, secretary of internal affairs, Harrisburg; George W. Lehman, engineer, department of internal affairs, Harrisburg; Burd L. Patterson, secretary of Lake Erie and Ohio River Canal Board, Pittsburgh; Joseph W. Moyer, Pottsville; M. H. Spicker, Pottsville; Joseph H. Zerbey, president of Schuylkill Canal and Improvement Association and editor and proprietor of Pottsville Republican, Pottsville; W. H. Barbour, Chamber of Commerce, Pottsville; Charles D. Burkey, representing borough council, Hamburg; J. Edward Miller, Hamburg; I. S. Lenhart, Hamburg; O. H. Lincoln, Pottstown; W. L. Binder, representing Rotary Club and Businessmen's Association, Pottstown; A. W. Urner, Spring City; H. R. Black, representing Businessmen's Association, Royersford; H. E. Campbell, Royersford; Gilbert R. Fox, member of borough council, Norristown; Harry P. Hiltner, borough treasurer, Norristown; Norman Matthias, president of borough council, Norristown; Richard H. Bate, representing council of Conshohocken; William Ellis, Phoenixville; E. A. Barkley, Phoenixville; Mayor John K. Stauffer, Wellington M. Bertolet, city solicitor; Councilmen Edward C. Hunter, D. Elmer Dampman, W. B. Yerger and William J. Smith, City Clerk Charles Marks, Rev. Dr. Scott R. Wagner, Rev. William B. Smith, Rev. H. Y. Stoner, W. U. Barr, T. M. Leinbach, Thomas C. Seidel, Jere H. Barr, J. W. Klein, Fred S. Cook, H. T. Shick, William H. Hendricks, J. W. H. Glass, John B. Kauffman, Charles T. Miley, Reading; A. G. Berkendahl, Mt. Penn; S. C. Wattenstein, Spring City, and A. F. Weimer, Spring City.

GETS COPY OF BILL RELATIVE TO CANAL

Norristown Times, 3/25/20

Gilbert R. Fox Receives Same From Congressman Watson.

Attorney Gilbert R. Fox, as chairman of the Legislative Committee of the Schuylkill Canal Improvement Company, today received from Congressman Watson a copy of House Bill No. 13206 which the local representative has introduced in Congress in furtherance of the efforts of the association to have the local canal improved so that heavy freight may be carried thereon as in the days of yore.

This bill authorizes "and directs the Secretary of War to cause a survey to be made of the Schuylkill Canal," and reads as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled, that for the purpose of increasing and improving transportation facilities of the Nation, the sum of $10,000 be, and the same is hereby appropriated, out of the moneys in the treasury not otherwise appropriated, to be immediately available, and to be expended under the direction of the Secretary of War, who shall cause a survey to be made of the Schuylkill Canal, in the State of Pennsylvania, under the supervision of the Chief of Engineers to determine the advisability and cost to the United States to reconstruct it, and the Secretary of War shall report to Congress the approximate cost of reconstruction as will readily accommodate barges drawing at least ten feet of water."

TO PRESERVE BIG DAMS

POTTSVILLE PEOPLE WANT CANAL FEEDERS MAINTAINED.

Rdg Eagle 12/15/19

As the first step towards the reclamation of the Schuylkill canal, which an association of Reading, Pottsville and other Schuylkill Valley men has been formed to bring about, an effort is being made to preserve the big dams at the head of the canal when it was navigable as far as Pottsville.

J. H. Zerbey, editor and owner of the Pottsville Republican, one of the canal restoration boomers, has been selected as the new head of the city planning commission. The new council intends to secure the Tumbling Run Park, conceded one of the finest resorts in the coal region, for the benefit of the people of Pottsville, if the task is within the possibilities, and has selected Editor Zerbey to head the movement for the people.

Tumbling Run Park comprises several large lakes at the head of navigation of the Schuylkill canal, the reopening of which Zerbey has ardently advocated. The park is on the outskirts of the city, and up until recently the people were given full privileges in its use. Suddenly the coal corporations decided to use the water for mine purposes, ordering the public off. The redemption of Tumbling Run for the benefit of the people of Pottsville was one of the campaign pledges of the newly elected council. The city planning commission has power to seize the land for the benefit for the people.

POTTSVILLE CANAL ITEM IN

Appropriation of $7,500,000 Included in Federal Measure.

Phila. Record

Pottsville, Pa., March 28.—The Schuylkill Canal Association announced today that it has succeeded in getting an appropriation of $7,500,000 for the rejuvenation of the Schuylkill canal between here and Philadelphia included in the inland waterways appropriation which is to go before the coming Congress. This sum would put the canal in position to ship millions of tons of anthracite yearly from here to Philadelphia and it is claimed would greatly reduce transportation charges to consumers.

The bill provides for the rebuilding of the canal from Port Clinton, the present shipping point, 14 miles below here, up to Pottsville, the original terminal 50 years ago. Conshohocken, Norristown, Phoenixville, Royersford, Leesport, Hamburg, Reading and Schuylkill Haven have active membership in the association, along with Pottsville.

$1,400,000 FOR THE SCHUYLKILL CANAL REVIVAL

IN NEW CONGRESS BILL TO BE PRESENTED AT WASHINGTON

Rdg Eagle - about 3/27/24

J. W. H. Glass, of this city, chairman of the executive committee of the Schuylkill Canal Improvement Association and also its vice president, has received the following letter from J. H. Zerbe, of Pottsville, president of the association:

"As a result of the labors of all of us and our friends, and especially of my close personal association with the Pitsburgh canal people, I take pleasure in calling your attention to the fact that a bill has been prepared to be introduced next month into Congress under the auspices of the Mississippi to Atlantic internal waterways committee, of which we are members, which is an improvement on previous bills. It provides for an appropriation of a hundred million dollars annually for the next five years. Specific mention is made in the bill of Schuylkill navigation canal of $1,400,000, but there is one stipulation that we must guard against, which is that no improvement shall be undertaken until they are approved by the United States engineers.

"Anyhow we are on the list on the face of the earth, and now we must be prepared to fight and to show our approval by going to Washington when called upon to back our part of the measure.

"Meantime it is up to us to stir up state aid. Won't you suggest the time for a half dozen of us to get together and go to Harrisburg before the Legislature adjourns?"

A survey of the proposed improvement was made during the war by United States engineers and reported favorably by them but when the armistice was declared, the matter was dropped.

There was introduced at the last session of Congress a bill known as the Campbell bill, but Congress adjourned before action was taken. Glass appeared before a congressional committee in 1920 and the matter was favorably received by the members.

FAVORS INLAND WATERWAYS

2/27 - 1920

Delaware and Raritan Canal a Necessity, Says Report to Hines

DAT[illegible]RGO.

[illegible]ARACTER OF.

Washington, Feb. 27.—(By A. P.)—Urging a thorough-going experiment in the development of the inland waterways of the country, G. A. Tomlinson, director of the division of inland waterways of the railroad administration, in his annual report today to Director General Hines declared that "a complete economic justification for these methods of transportation" would be shown.

Mr. Tomlinson summarized the operations under the railroad administration during 1919 on the New York canal, the Delaware and Raritan canal, the lower Mississippi between St. Louis and New Orleans and the Warrior river in Alabama and the Chesapeake and Ohio canal.

Despite the limited traffic in the Delaware and Raritan canal, Mr. Tomlinson declares that operation of the waterway could not be discontinued without disregard to the interests of the users of the canal. The number of loaded boats passing through the waterway, both east bound and west bound, during 1919 was 1358, the operation resulting in a deficit of $108,036.76 for the year.

10 MILLIONS WANTED TO IMPROVE CANAL

Rdg News Times 3/4/20

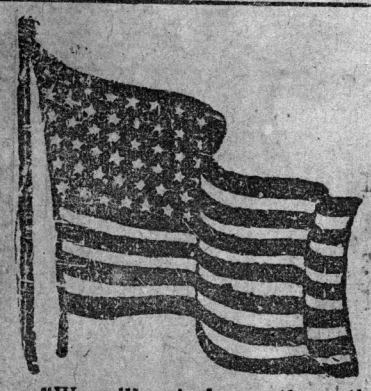
The meeting of the executive committee connected with the association having for its purpose the opening of the Schuylkill canal for navigation purposes, at Norristown, last evening, was in charge of J. H. W. Glass, of this city.

It was decided to draw up a bill for presentation to congress, to be placed in charge of Gilbert R. Fox. Congress will be asked to make a survey of the canal and perhaps to authorize an appropriation of $10,000,000 to put through the project.

Mr. Glass will see Mayor Moore, of Philadelphia, to invite him to the next meeting. He will also address the Philadelphia council. A convention will be held in Phoenixville on Saturday, March 21.

Councils of cities along the route of the canal will be asked to endorse the movement, which now seems to have taken firm root.

NORRISTOWN, PA., JAN. 24, 1920



"We will not choose the path of submission and suffer the most sacred rights of our nation and our people to be ignored or violated." President Wilson in speech to Congress.

Considerable progress was effected in Reading, at the late meeting of the Schuylkill Canal Association. There is no question but that the men who represented the along-river towns in that body take a deep interest in the plan to bring the old waterway again into such a condition that traffic approaching that of years ago may be equalled, if not surpassed. "Hope springs eternal in the human heart," and emphasized reference can be had to the canal would-be reclaimers, because of the state and federal phase of the move whereby it is calculated to score. By interesting themselves in the government aid way of doing things of this sort, they fully expect one day to triumph. They are all good workers, apparently, and, of a truth, ought to "get what they are after."

1/24/20

THE SCHUYLKILL CANAL PROJECT

The Schuylkill county men who are reviving discussion of the possible modernization of the Schuylkill Canal have an objective that is worthy their zeal and which deserves the most careful inquiry along every practical line.

In the single phase of the potential of such a waterway as a means for the transportation of the coal which is now carried by the railroad systems threading the valley, the project involves possibilities which warrant the employment of the best engineering genius available for a study of the situation and a test of its economic opportunity.

Recently the Federal Trade Commission has made public its investigation of the cost of anthracite production in the year 1918, resulting in a margin between cost and selling price so small that it seems obvious that further expense in the mining of coal, for labor or other factor, must be handed on to the consumer. At the other end, the distributor of anthracite seems to be similarly able to make out his case so conclusively that a reduction in price cannot be expected there. That leaves the cost of transportation to be considered, and if the railroads are now charging only a reasonable profit above their operating cost, the problem finally resolves itself into the question whether or not cheaper means of transportation can be found. The obvious suggestion is the waterway.

Can anthracite be floated from the mines to Philadelphia more cheaply than it can be hauled by locomotives? It may be admitted that it cannot be through a canal of the dimensions of the present waterway. But can a waterway be constructed, either by the enlargement of the present canal, or by the utilization of the river, for a part or the entire distance, after the manner in which the New York Barge Canal has taken the place of the old Erie, of sufficient capacity to provide economic transportation?

This is the real problem, and in its ultimate duplication in other directions, it may comprise what has been suggested as Pensylvania's duty as the custodian of the anthracite supply of the country—the provision of adequate coal routes or highways by which its invaluable supply may be more reasonably available at its boundaries.

CANAL AS A BIG BUSINESS ASSET

Rdg. Eagle — 1/25/20

"The opening of the Schuylkill canal can hardly be regarded in the light of a newcomer soliciting favor with the public, for the canal as a means of transportation is the pioneer in this section," says the Pottsville Republican.

"When the first railroad was proposed there was objection to it by certain classes on the ground that it would result in competition with the waterway and hurt its business. But the railroad came and no harm was done financially to the canal as a result of this competition, even though later the railroad did manage to get control and close up this waterway in order to obtain a monopoly of the transportation facilities from this busy industrial center.

"When the Pennsylvania Railroad first sought to come here it was opposed on the ground that competition would be harmful to the Reading Co. We all know that there has been enough business for both companies and that the city and its business interests have been wonderfully improved as a result and that it has had the effect of doubling the number of railroad workers and the railroad business.

"Then when the opposition telephone company aspired to rights in this section it was opposed on the same grounds. The same was true of the rival telegraph company. It is but a natural condition to be expected from certain quarters.

"The reopening of the Schuylkill Canal is now opposed because it will result in competition with the railroad monopoly, particularly in the handling of coal. It is also opposed because it may result in some embarrassing disclosures and because it will result in the demand for the return to the people of some of the property rights and privileges that have been wrongfully taken from them with the abandonment of the canal.

"But as far as the public is concerned the reopening of this waterway is going to be a great boom to business in general. It is going to add to the importance and the business prosperity of the city and the region and it is going to result in more work and more workmen.

"Waterways are to be developed along the entire Atlantic coast and it will be a big thing when Pottsville is included in this great network of modern water connections. The region is awakening to the great possibilities ahead and the moss back who opposed first railroads because they would hurt the canal and now the canal because it will hurt the railroads, and who is the same who opposed the coming of the rival telephone and telegraph companies, will find himself in a hopeless and ridiculous mino[illegible]ty.

TO CALL MEETING HERE TO BOOST CANAL PLANS

READING MAN HEADS EXECUTIVE COMMITTEE AT WORK ON SCHUYLKILL PROJECT.

Rdg. Eagle — 12/21/19

The executive committee of the Schuylkill Canal Improvement Association, formed for the purpose of boosting the reconstruction of the Schuylkill canal from the coal regions to Philadelphia, of which J. W. H. Glass, of this city, is chairman, with J. H. Zerbey, of Pottsville; E. A. Markley, of Phoenixville, and W. L. Binder, of Pottstown, the other members, will shortly begin a crusade throughout the Schuylkill Valley in behalf of the canal, which is one of a half dozen specifically mentioned in the Campbell bill now before Congress, which allows $18,000,000 annually for five years for the canalization of rivers. Mr. Glass says:

"The Schuylkill Canal Improvement Asssociation, in order to accomplish results, must have the support and co-operation of the communities involved. It is imperative that not only the citizenry, but also civic organizations, trade bodies, welfare associations, local authorities, societies, lodges, etc., aid the association in its efforts.

"Reading is the largest community along the canal, and as chairman of the executive board I deem it proper to call the first public meeting here, with officials of the Schuylkill Canal Improvement Association attending and reporting the doings of the convention held recently at Washington. I invite suggestions, especially as to a date for public meeting, in order that as many as possible may express their views and an organization be formed in Reading or Berks county.

"The movement is not selfish in its motive, but for the realization of a worthy purpose. Those who have labored in the interest of the Schuylkill canal and those who are enthusiastic in support of the improvement of this important waterway should now come forward.

"The Campbell bill is now pending in the committee on rivers and harbors. This should be an incentive for enthusiasm, work and greater activity on our part. There is no telling at this time what the fate of that bill may be."

Jacob W. H. Glass.

Phila Inquirer
May 24, 1924

THE P

WALLS TO CHECK CULM

Schuylkill Coal Operators to Check Wash of Banks Into River

Special to The Inquirer.

POTTSVILLE, Pa., May 25.—The immense amount of culm now being washed down the Schuylkill River will show an immediate slacking up, coal operators stated today, as tomorrow culm banks will be walled up to prevent the heavy rains from washing down the culm into the river. The amount now going down is so large as to make it certain that many towns down the Schuylkill Valley will take action if the nuisance is not stopped.

Culm was noticed this morning forty miles down the river from this city, and it is said the high water in the river is now washing the culm down close to Philadelphia. By intercepting the flow of streams it is believed the operators can prevent the bed of the river in other counties from being clogged with material, as it is the case in this county.

READING MEETING DISCUSSES CANAL

Delegates Take Preparatory Step to Bring Old Waterway Again Into Use

NORRISTOWN ON THE JOB

Had Three Representatives Present; Gets Place on Executive Body

Norristown Daily Times 1/22/20

Permanent organization was effected and plans completed for pushing the Schuylkill Canal transportation project at the convention of the Schuylkill Canal Improvement Association, held yesterday, at the Hotel Berkshire, in Reading. The object of the convention was to perfect plans for the enlistment of state and federal aid to reopen the canal as an artery of navigation. There was a large attendance of delegates from the various towns along the route of the canal, and all emphasized the transportation situation as it affects their respective communities.

Norristown was represented by Norwood Matthias, Esq., President of Town Council, and Attorney Gilbert R. Fox, also a Councilman, and Harry P. Hiltner, Treasurer.

Conshohocken was represented by Richard H. Bate, Sr., Councilman and manufacturer.

Mayor Stauffer and members of the Reading City Council were among the guests. The mayor delivered the address of welcome in which he acquainted the visitors with the favorable viewpoint he and other city executives have come to regard the canal opening project.

The meeting was called to order by J. H. Zerby, of Pottsville, president of the association. W. L. Binder, of Pottstown, served as registration secretary.

Million Tons of Freight.

Mayor Stauffer in his address said there is no reason why the canal, if restored to its proper functioning, cannot be of great public service as a carrier of heavy tonnage, thereby reducing congestion on the railroads. He stated that he knew of the plans of one concern which would be in position to start shipping at once for building purposes anywhere along its route 1,000,000 tons of slag. He pointed out also that the canal in its present state had caused a big nuisance to municipalities along its route through its accumulation of deposits of culm.

"It is a growing menace and a nuisance as it is," he said, and "I believe that the canal association could do much towards remedying the matter if taken up with the proper authorities."

J. W. H. Glass, of Reading, who is first vice president and chairman of the executive board, gave a historical sketch of the canal. He has been a leading factor in the matter of endeavoring to interest state and federal aid in putting the canal back to the original purpose it once served when it was considered as one of the leading transportation arteries in this state.

"Unfortunately, canal movements have, from time to time, been placed before Congress, but have always been pushed aside by that body," said J. H. Zerbey, of Pottsville, president of the organization. He stated that considerable work must be accomplished by the association before February 21, at which time the Rivers and Harbors Committee of Congress convenes and when it is hoped that body will consider the association's efforts in a favorable light.

Referring to control of waterways by railroads, Mr. Zerbey said: "I'm not opposed to corporations, but we must not let them scare us. The bulk of the larger corporations I have found at heart are not philanthropic, and all we must expect of the railroads in this project is that they play fair with the general public."

Luncheon was served at 12.45 p. m. and then followed the afternoon business session with several addresses, and the nomination and election of officers.

These officers were chosen: J. H. Zerbey, Sr., of Pottsville, president; J. W. H. Glass, of Reading, first vice president; E. A. Barkley, of Phoenixville, second vice president; W. L. Binder, of Pottstown, secretary; D. Elmer Dampman, of Reading, treasurer.

The following Executive Committee was named: J. H. Zerbey, Jr., Pottsville; E. J. Thomas, Schuylkill Haven; Mayor Stauffer, Reading; Fred S. Cook, Reading; C. G. Bergendall, Mt. Penn; W. L. Binder, Pottstown; H. R. Black, Royersford; A. W. Urner, Spring City; William Ellis, Phoenixville; Gilbert R. Fox, Norristown; Richard H. Bate, Conshohocken; C. J. Esterly, Wyomissing; Harry Good, West Reading; Charles D. Berkey, Hamburg; Walter H. Focht, Birdsboro.

The convention was addressed by James H. Craig, Deputy Secretary of Internal Affairs, of Pennsylvania; George M. Lehman, engineer of the department of Internal Afafirs of Pennsylvania, and the City Solicitor of Pottsville.

After business had been completed there was an auto tour of the city, and then dinner at the Hotel Berkshire, and an open forum on "How Improvement of Shipping Facilities for Heavy Tonnage by Canal Will Benefit All Business Interests in Cities and Towns of Schuylkill Valley, by Relieving Traffic Congestion and Helping Reduce Costs of Living."

CANAL TO SOLVE LIVING PROBLEM, DELEGATES TOLD

"Can Cut Cost in Half," Declaration of Patterson; Bertolet Questions Practicability

Rdg. News Times — 1/22/20

"The cost of living can be reduced half, if proper transportation is given products," said Burd S. Patterson, of Pittsburgh, secretary to the Atlantic Board of Internal Waterways, at a meeting of the Schuylkill Canal Improvement Association held in the Berkshire Hotel Wednesday night.

"Today the railroads are beginning to realize that there is enough transportation trade in the United States for all concerned," said Mr. Patterson. "The time is here when they have learned to co-operate with all transportation lines."

At the afternoon session Wellington M. Bertolet, city solicitor of Reading, said that from his personal observation the canal project was impossible. He was followed by George H. Lehman, of the state internal department, who said he had made a personal survey and believed that the project could be carried to a successful conclusion.

Mayor Stauffer welcomed the delegates representing most of the towns in the Schuylkill valley. A resolution was introduced by President J. H. Zerbey, of Pottsville, calling upon Congress to make an official survey. A delegation was also chosen to represent the association at a convention to be held in Washington, February 21.

The delegates voted to hold the next conference in Phoenixville on March 22.

CANAL CONVENTION HERE

12/29/19 Rdg Eagle

J. W. H. Glass, an official of the newly organized Schuylkill Canal Improvement Association, will shortly call a convention of members of the association and representatives of civic bodies in Reading, Pottsville, Pottstown, Norristown, Hamburg, Phoenixville and other points along the Schuylkill River and canal. The restoration of the canal and its operation as a government waterway from the anthracite field to tidewater is the aim of the association. The meeting will be held the second week in January, dates to be announced soon.

Reading Eagle Dec. 30-19

CANAL CONVENTION JAN. 21

Wednesday, Jan. 21, has been selected as the date for the convention here of the Schuylkill Canal Improvement Association, recently organized at Washington. The civic bodies and individuals interested in the movement to restore the Schuylkill canal to usefulness are invited to meet representatives of other towns and cities. There will be afternoon and evening sessions at the Berkshire Hotel. A dinner will be served at 6 o'clock. J. W. H. Glass, an officer of the association, requests people interested in the movement to send their names to him, in case they can arrange to attend the dinner. The convention will be held here because of its central location and a plan of action is to be adopted at this meeting.

COUNCILMAN AS TREASURER

Rdg. Eagle — 1/8/20

Will Receive Subscriptions for Canal Boosters' Dinner.

Councilman D. Elmer Dampman will serve as treasurer for the Schuylkill Canal Improvement Association dinner to take place here on Wednesday, Jan. 21, at the Hotel Berkshire. Tickets will be issued for the dinner to feature the canal booster convention to all who send their checks or cash to Mr. Dampman. The convention sessions will be in the afternoon and evening and businessmen who will be unable to find time for the dinner are urged to attend the business meetings. The association is trying to secure state or federal aid for the reconstruction of the canal as a freight carrier between Philadelphia, at tidewater, and Reading and Pottsville, the largest cities at this end of the waterway, which is over 80 miles long.

Burd S. Patterson, of Pittsburgh, a newspaperman, secretary of the Pittsburgh and Lake Erie Canal, will be one of the speakers at the dinner and at the business sessions as well.

WANT DAMS RESTORED

Rdg Eagle — 1/16/20

POTTSVILLE'S BIG FEEDERS TO CANAL NEEDED, COUNCIL ASKS.

On the eve of the waterways convention in this city next week, to boost the restoration of the Schuylkill Canal, Pottsville city council has taken steps to aid the movement. The officials there demand that coal companies which have seized the Tumbling Run dams, above Pottsville, the headwaters of the canal, restore them to the purpose for which they were built.

A resolution was passed declaring that this canal was a public waterway on which all the people of the anthracite region had the privilege of placing boats and engaging in transportation of coal and other articles of commerce with Philadelphia and that the people were never consulted in the practical abandoment of the canal and the diversion of the dams to use by coal companies.

Councilmen John B. Dengler and Dr. J. Oren Bearstler introduced the resolutions, which passed unanimously. At the same time a demand was made that the Tumbling Run Park, also seized by coal and water corporations, be returned to the people and preparations were made for legal proceedings if the demands are not complied with. City Solicitor Morris Spicker was elected a delegate to the inland waterways convention at Reading next week, to be held to boom the rejuvenation of the canal.

HILADELPHIA, SUNDAY MORNING, SEPTEMBER 14, 192

LAW SAVES RIVERS FROM OIL MENACE

Federal Edict Protecting Delaware and Schuylkill From Pollution Now Active

CARRIES LARGE PENALTIES

At last a law has gone into effect which may help to protect the Delaware and Schuylkill Rivers from pollution with oil—a nuisance which local authorities say has grown into a menace to property and life.

A year ago a passerby lighted a cigarette on the Passyunk avenue bridge, tossed the lighted match into the water—and the river burst into flames. The new law furnished a way to try to prevent such happenings hereafter and to try to rescue the banks of the Schuylkill from their past condition of being slimy with oil.

This new law, passed by Congress and signed by the President June 7, became enforceable last week. Three months had to elapse after its passage before its penalties could be levied.

Large Fines Provided

The new law forbids discharge of oil into coastal navigable waters from vessels using oil for fuel or carrying more oil than is required for lubricating purposes. Federal officials in charge of river and harbor improvements and the officers of the customs and coast guard service have authority to arrest violators. The penalty for violation is a fine of $500 to $2500 or imprisonment for thirty days to one year, or both. The discharge of oil from the shore, however, is not covered by the new act. But $50,000 has been appropriated for an investigation by the War Department concerning what polluting substances are being deposited from shore in navigable waters or in streams flowing into such waters. The Secretary of War has been directed to report recommendations to Congress for remedial legislation.

Among the chief offenders in the past, in discharge of oil into navigable waters, have been oil tankers. After discharging a cargo of oil in some foreign port, the vessel fills its tanks with water, then crosses the ocean homeward bound. On reaching the Capes, the tanker has been likely to begin at once pumping out the water from its tanks, spreading a film of oil over the Delaware River all the way up from the ocean. The object has been to save time by having the tanks empty and ready to receive new cargo the minute the tanker docks.

New Separator May Be Used

Use of a new device which is similar in principle to a cream separator makes it possible for the oil to be recovered when a water-ballasted tanker is pumped out. Thus there is hope the tankers may be encouraged to obey the law by the fact that compliance with it would save money.

"Harbors can be kept clean from oil by proper supervision," declared Colonel F. C. Boggs, of the Corps of Engineers, United States Army, district engineer in charge of river and harbor improvements in this district, which includes the Delaware and Schuylkill Rivers and their tributaries. "Los Angeles Harbor, which has a great traffic in oil, is a notable case in point. But enforcement is no easy task."

DATE.

FIRST CANAL CONVENTION

Hamburg Item 1/15/20

IMPROVEMENT ASSOCIATION TO MEET AT READING

The first annual convention of the Schuylkill Canal Improvement Association, which was formed for the purpose of canalizing the Schuylkill canal from the coal regions to tidewater, will be held next Wednesday, January 21, at the Hotel Berkshire, Reading.

The interest which has already been manifested in this movement by the communities affected by this project, and numerous organizations, augurs well for an early accomplishment at the object in making the Schuylkill canal a medium of transportation. Since there is now pending in the House rivers and harbors committee at Washington a bill known as the Campbell bill, which affects the Schuylkill canal, this is the opportune time to show interest and activity in this movement. The convention promises to be important and interesting from every point of view.

The opening session will take place at 10 a. m., the business session at 3 p. m., and a special dinner will be served at 6 p. m.

Hamburg and the local Board of Trade will be officially represented by Charles D. Burkey and H. Raymond Shollenberger, heads of the local banks, who will very likely be accompanied by Burgess Sousley and A. J. Raubenhold, president of the trade board, and probably representatives of Stroh & Seaman and I. S. Lenhart & Son, coal dealers, who are primarily interested in the successful operation of the canal.

ER OF.

CANAL LINKED IN BIG PROJECT

CAMPBELL BILL WOULD IMPROVE SCHUYLKILL

AMBITIOUS SCHEME TO RE-OPEN, ENLARGE AND EXTEND INLAND WATERWAY THROUGH READING.

Rdg. Eagle 12/12/19

Washington, Dec. 12 (Special).—The Schuylkill canal probably received more prominence in the past few days than was ever accorded it during its full 100 years of existence, and plans for its improvement are included with those for the much larger avenues of water commerce. While the chances of final accomplishment of improvement are not overwhelming, yet the prospect for government control and financing of the Schuylkill canal is not the least of the possibilities for the betterment of the other inland waterways of the nation.

As the result of the Washington meetings of Monday and Tuesday, the Schuylkill canal improvement plans are now incorporated in the general list of the main bill which is to go before Congress after the first of the year calling for national consideration of the advantages of improved water transportation incorporated under the following projects:

The Pittsburgh and Lake Erie canal.

The Atlantic coastways system.

The Mississippi Valley waterways.

The gulf plans of inland water communications from Galveston to New Orleans to Florida to a connection with the Atlantic coast system.

The Ohio River and the upper Mississippi and Missouri River projects.

The different projects along the Pacific coast.

The Schuylkill canal from Philadelphia to Phoenixville, Pottstown, Reading, Hamburg and Pottsville, reopening, enlarging and extending.

$100,000,000 a Year.

And finally, George Washington's original canal scheme by tunnels and lifts over the Alleghany Mountain and forming a connecting link between the Pittsburgh district, the national capital and the nation's greatest naval rendezvous at Hampton Roads (Norfolk, Va.).

There are other canals and waterways, now in course of construction, seeking governmental aid, but this comprehensive bill specifically enumerates and calls for the above work to be financed by the government at the rate of $100,000,000 a year for five years.

Chicago and the upper Mississippi and Missouri sections had a separate plan, as had also some canal systems in Indiana, as well as the improvement of the Tennessee River, and lastly, the scheme of an ocean-route waterway from Chicago to the Atlantic by way of the Great Lakes and the St. Lawrence River.

This latter scheme is being bitterly fought by New York city and New York state canal advocates, businessmen and state officials, because it would divert from New York railroads and canals the Great Lakes traffic that now passes through the United States from the Buffalo gateway.

The plan, which includes the Schuylkill canal, is covered in what is called the Campbell bill and is receiving the support of more general representation from all over the nation than either of the other projects, but the boosters for some of the specific projects are using brass band and calitumpian tactics that are making more noise, but the consensus of opinion is that the canalization of the waterways of the nation is more likely to be accomplished under the Campbell bill than by individual projects and in a much quicker space of time, so that the Schuylkill canal project is listed with the right conglomeration of canalizing associations.

Endorsed by Rivers and Harbors People.

The work must not be confounded with the rivers and harbors convention now in session at Washington. This is a body a quarter of a century old that has met annually to further the coastwise and leading river improvements, but the iron-clad rule of this body is not to specially mention any one particular project, only backing the rivers and harbors committee of Congress, in furtherance of the general plan for improvement of the coastwise and principal river water facilities. This is a large and important gathering from all sections of the nation, with Senator Ransdell, of Louisiana, as its chairman, but he is now to be succeeded by Congressman Small, of North Carolina.

The consideration of the canalization corporations included by the Campbell bill has been endorsed by the rivers and harbors convention, and officials of the various Campbell bill projects have been designated as officers of the rivers and harbors convention body, even to a possible [illegible] that list of one of the Schuylkill canal improvement association officers.

Pennsylvania, while interested in all canalization projects, and anxious to have all waterways improved, is especially concerned with the Pittsburgh and Lake Erie, the Schuylkill canal and the Atlantic coastways inland waterways.

This latter project is the one that has been contended for so long by J. Hampton Moore, mayor-elect of Philadelphia, and comprises systems extending inland from Boston to New York, Trenton, Philadelphia, Baltimore, Norfolk and Jacksonville. Much work has been done on this canal system and the government has appropriated money at different times to prepare the connecting links and enlarge existing facilities, but the final financing of the general preparatory work of this canal must come from additional legislation and this can be accomplished by the provisions of the Campbell bill.

In the Atlantic coastway inland canal system are included the New York state canals from Buffalo to Albany and New York city and the New York special harbor improvements.

Part of Coastwise System.

Likewise, because of the zoning division, the Schuylkill canal project is for the time being attached to the Atlantic coastwise system.

The improvement of the Lehigh canal and the preparation of the Susquehanna to Harrisburg for waterways transportation facilities are likewise spoken of, but these were not presented at Washington deliberations and consequently the Schuylkill canal is the only one of the three in Pennsylvania that is officially included and recognized in the planning for inland waterways improvements. Of course, this does not bar the others from eventually joining the aggregation, but they are not included in the bill that is now to be pushed before Congress.

Among those who have taken very active part in the endeavor to bring about a governmental improvement in the Schuylkill canal are representative business men from Pottsville, Hamburg, Reading, Birdsboro, Pottstown, Royersford, Spring City, Phoenixville and Norristown, and these have formed the Schuylkill Canal Improvement Association of which the following are the temporary officers: President, W. H. Zerbey, of Pottsville; first vice president, J. W. H. Glass, of Reading; second vice president; F. A. Barkley, of Phoenixville; secretary, W. L. Binder, of Pottstown; treasurer, J. A. Bausher, of Hamburg. Among the others who are taking special interest in the matter and who will be actively connected with the association in its future work are the officials of the Pottsville Merchants' Association and Board of Trade, the Hamburg Board of Trade, the Reading Chamber of Commerce, the civic bodies of all the towns between Reading and Norristown, the Commercial Club and the leading citizens of Pottstown, the City Council of Norristown. Working in conjunction with the Schuylkill canal people were delegates from the Philadelphia Manufacturers' Club and the Bourse.

It is planned to hold meetings in the various towns along the Schuylkill, when and where desired and to take up this matter carefully and jointly with all of the communities interested, because many of them are at present vitally concerned about their local municipal water supply from the Schuylkill canal, especially Pottstown, Phoenixville and Norristown, as well as many of the smaller communities.

CANAL MEETING

Rdg. Eagle 1/17/20

TO BE HELD IN THIS CITY NEXT WEEK.

First definite steps toward the realization of a project which has as its aim the establishment of the Schuylkill canal in its former sphere of usefulness as an inland waterway from the coal regions in the eastern part of the state to tidewater will be taken at a one-day convention to be held by the Schuylkill Canal Improvement Association to be held in Reading Wednesday, Jan. 21, at the Hotel Berkshire.

Invitations to state and national officials and also to all boroughs and cities along the waterway have been mailed and replies received. There will be representatives from all of the towns along the route. Speakers have not yet been selected, but one of the most prominent will be Burd S. Patterson, of Pittsburgh, secretary of the Lake Erie and Ohio River canal board of the commonwealth of Pennsylvania.

James H. Craig, deputy secretary of the Department of Internal Affairs, and George M. Lehman, an engineer of the department, plan to attend. Secretary James F. Woodward will be unable to be present.

Regrets have been received from Gov. Sproul, Congressman Arthur G. Dewalt and other prominent officials. All of them have declared that they are heartily in sympathy with the movement and offer their services at any time they may be needed.

J. W. H. Glass, chairman of the executive board and vice president of the association, has been very active in the work and declares that he feels much encouraged by the assurance of the secretary of internal affairs that he is interested in the move to canalize the canal and make it once more an efficient inland waterway. "Since 1874," Mr. Glass declared, "the inland waterways have been under the control of this department and if they take an interest in this work we are likely to realize our aims."

D. Elmer Dampman, city councilman, of Reading, is treasurer of the organization. J. H. Zerbey, of Pottsville, is president, and W. L. Binder, Pottstown, secretary.

The program for next Wednesday calls for an opening session at 10 o'clock, a business meeting in the afternoon at 3 o'clock and dinner at 6 p. m. The public is invited to attend the affair, including the banquet at 6 o'clock for which there is a charge of $2.

WE HAVE NO DELEGATE

Norristown 12/10/19

Other Commuters Well Represented Anent Canal Proposition

Norristown and immediate vicinity was the only industrial center in the Schuylkill Valley that has not an official representation in Washington today before the Inland waterways Commission pleading for the re-opening of the Schuylkill Canal from its headquarters in the lower Schuylkill mining regions to tidewater.

The special car over the Pennsylvania railroad which carried the Upper Schuylkill delegation to Washington, passed down the Penn. R. R. attached to the 12.22 p. m. train, yesterday, receiving its last delegation at Phoenixville. The other communities in the lower Schuylkill Valley to be represented is Royersford, Spring City and Pottstown. Reading send quite a delegation, while Pottsville, Schuylkill Haven, Hamburg and other communities send large delegations.

WANT OLD CANAL REVIVED

Reading Eagle

SCHUYLKILL VALLEY TOWNS TO SEND BOOSTERS TO WASHINGTON.

Rdg Eagle Dec 12/14/19

Pottsville, Schuylkill Haven, Hamburg and various other towns have decided to send delegates to the inland waterways convention at Washington on Monday, Dec. 8, to boost the reopening of the Schuylkill Canal. J. H. Zerbey, a Pottsville newspaper publisher, is head of the coal region delegation. Reading, Pottstown, Phoenixville and Norristown are asked to send committees to the convention. The sessions will be held at the Hotel Washington. The Pottsville, Schuylkill Haven and Hamburg men will stop at the Hotel Burlington.

J. K. W. Glass, a Reading businessman, has volunteered his time and services as a delegate from Reading and may attend the sessions. Mr. Glass is urging the restoration of the Schuylkill Canal to its old-time place of importance in traffic in the Pottsville-to-Philadelphia route.

STATE OFFERS THREE METHODS FOR FLOOD CONTROL IN READING

Rdg. Eagle —— Aug. 1922.

SUGGESTS ENLARGEMENT OF RIVER CHANNEL OR BUILDING OF CONCRETE WALL OR LEVEE ALONG EAST BANK

In 1919 the Pennsylvania water supply commission sent to Mayor Filbert a report of a river and culm survey of the Schuylkill that had been made by state engineers, the contents of which are of particular interest at this time because of the revival of the subject due to the huge deposits of detritus that clog the channel of the river in and near Reading.

At that time Mayor Filbert acknowledged receipt of the report and later, on request of the city, the state made a topographic survey of the Schuylkill channel at a cost of more than $3,000, and loaned it to the city.

The state has no appropriation for the work of deepening the channel. Such appropriations could be made only by special acts. If the Berks legislators had gotten busy at the time the report was first sent to Reading, four years ago, it is possible they might have procured appropriations from the state to carry on this work.

Thomas J. Lynch, secretary of the state water supply commission, when seen by the Eagle's Harrisburg correspondent, declared that this survey is still available.

Under the caption, "Suggestions for flood control plans for the Schuylkill River at Reading," the river and culm survey that was sent to Mayor Filbert Aug. 26, 1919, covered the subject constructively and exhaustively. Mr. Filbert replied on Sept. 2, 1919. The complete text of that report follows:

DRAINS 900 SQUARE MILES.

"The Schuylkill River, at Reading, has a drainage area of about 900 square miles, consisting largely of mountainous country. The mean annual rainfall is about 45 inches. More or less dependable high water marks have been preserved of the more important floods for more than 100 years.

"During recent years accurate records of flow have been kept, and from a knowledge of the characteristics of the river, estimates have been made of the discharges of the most important floods. The highest on record was that of September, 1850, the discharge of which is estimated to have been 80,000 cubic feet per second. In October, 1869, and on the last of February, 1902, floods occurred which reached within two feet of this extreme stage. The discharge on these occasions is estimated to have been about 70,000 cubic feet per second. The estimates of these early floods are probably much in error, but an examination of the topography of the watershed, and of the storm rainfall characteristics of the region, lead us to believe that a flood might occur at Reading of 90,000 to 100,000 cubic feet per second, but that such floods would be very rare.

EXPERIENCE MIGHT PROVE COSTLY.

"A flood like that of 1902 inundates all or parts of more than 30 city blocks, most of which are closely built up, and also covers many miles of main and side tracks of railroads within the city. A flood two or three feet higher than this, which may occur, would cause a great deal more damage. Quite generally a city in such a situation must actually go through the experience of a great flood before it will take account of its interest and be willing to pay for the necessary protection.

"In working out plans for flood prevention sometimes the problem is very much simplified by the fact that only one method of improvement is possible. In other cases several entirely feasible methods present themselves, any one of which can be followed at an expense that is fully justified.

"Floods on the Schuylkill River at Reading can be controlled by either of two or three methods, and careful and detailed surveys and studies will be required to determine finally which is best and least costly. Any method of flood control will be expensive, and may cost more than would seem at present to be justified by the interests involved.

THE TULPEHOCKEN CASE.

"Control by dams and retarding basins may be dismissed at once as impracticable in this case. Most of the best sites for dams and for storage areas are occupied by railroads. The Tulpehocken Creek, entering the Schuylkill from the west at Reading, has apparently excellent dam sites and storage areas that are not occupied by expensive improvements. This stream, doubtless, can be completely controlled by dams, but its drainage area is only 200 square miles, as compared with 900 square miles for the Schuylkill at Reading, so its control would only partially solve the problem. The control of this one stream by a dam and retarding basin probably would cost more than complete flood control for the city by other methods. Tulpehocken Creek would, however, furnish valuable water supply storage, if it should be needed, for industries in or below Reading. An examination of the map suggests a straightening of the river by cutting off two bends just below Reading. Such a straightening would eliminate the need for four large railroad bridges, but would require two very deep cuts, one of more than 100 feet. They would cost more than protection by other means, and would only partially solve the problem.

FEASIBLE METHODS.

"Methods of flood control which appear to be feasible from an engineering viewpoint are:

"The enlargement of the river channel by excavation.

"The construction of a concrete wall along the east bank of the river.

"The construction of a levee along the east bank.

"A combination of the three methods mentioned above.

"The enlargement of the river by excavating the channel would require the removal of perhaps 1,000,000 cubic yards of material in order to secure full protection. The most feasible method for doing this work probably would be excavation by means of dragline machines of the revolving type, loading the material on cars and transporting it to some place where it could be dumped. The cost would depend largely upon the difficulty of finding suitable places for wasting the excavated material, upon the character of the soil or rock excavated, and upon interference with existing improvements. These and general construction costs are so difficult to determine in this case that the cost per yard cannot be estimated without careful investigation. It probably would be between 60 cents and a dollar per cubic yard. Among objections to this plan would be the possible high cost of maintaining the excavated channel due to silting or caving of banks, the possibility of undermining bridge foundations and possible interference with existing dams. One important advantage of protection by channel excavation is the fact that local drainage would not be interrupted, and that a partial improvement might be carried out without danger of failure such as would follow the overtopping of levees.

LEVEE HARDLY FEASIBLE.

"A levee along the east bank of the river is not feasible unless the bed of the Schuylkill canal can be occupied because the canal and railroad tracks are too close to the river to allow levee construction between them. If the canal can be entirely abandoned, complete protection could be afforded the city by this means at a cost of perhaps half a million dollars, except that back water at the lower end might not be entirely prevented. If the canal cannot be entirely abandoned, it might be carried through the city in the bed of the river by the construction of two low dams fitted with locks, thus releasing the present canal for a levee location.

"The narrow strip of land between the canal and the river, while not wide enough for a levee, probably would be a suitable location for a concrete wall. The uncertainty in the cost of such a wall, aside from present fluctuations of construction costs in general, is because the character of the foundation is unknown, as are also the complications which would be encountered in occupying part of the canal right of way. Such a concrete wall would require a flood gate where the canal leaves the river in the upper part of the city, and probably another at the lower end of the city where the canal enters the river. The cost of flood protection by means of such a wall might be three-quarters of a million dollars, but dependable estimates would require very careful investigation.

MAY COST A MILLION.

"Along part of the east bank of the river through the city there is room to construct a levee without interfering with canal or railroads. The improvement might consist of an earth levee where there is room and of a concrete wall where the canal is very close to the river bank. Probably a limited amount of channel improvement would enable such a combined improvement to be carried out with further economies.

"The comparative economy of these different methods can be determined only by comparisons following careful examinations of foundation material for concrete walls, of the possibility of disposing of excavated earth, of the possibility of displacing or moving the canal, of the cost of right of way, and of other items. It is probable that complete protection by any method will cost not less than a half million dollars, and it is quite probable, judging from a preliminary examination, that complete protection can be secured for not to exceed a million dollars."

CANAL IMPROVEMENT PROPOSAL IS BOOSTED

Norristown Times — 3/22/20

Congressman Watson Submits Bill for Possible Action by National Legislators.

The proposal for the improvement of the Schuylkill Canal received a tremendous boost on Saturday afternoon, at a convention of the Schuylkill Canal Improvement Association in the City Hall in Phoenixville. There was a large and deeply interested audience present, and from the opening of the meeting at 2.30 until the close about 6 o'clock, many strong arguments were made, showing the seriousness of permitting the canal to be abandoned and also the wonderful advantage it would be to the communities if the canal were enlarged and improved, so as to make it a modern waterway.

Congressman Watson, delivered one of his convincing and forceful speeches, urging upon the people the importance of these inland waterways and the great advantage that they are to the shipper throughout the country. Transportation is the great need of the present time, and the railroads have now more than they can handle or will be able to handle for many years to come. Mr. Watson submitted to the meeting a proposed bill for action by Congress authorizing a survey of the Schuylkill Canal and making an appropriation for that purpose. This bill was referred to the Legislative Committee of the Association, of which Gilbert R. Fox, Esq., of Norristown, is chairman. The committee approved the bill, and it will be presented to Congress at an early date.

The convention desires to impress upon all who are interested in the preservation of the canal the importance of writing to their representatives in Washington and securing support for this bill.

Addresses were also made by Senator Eyre, James H. Craig, Deputy Secretary of Internal Affairs and George M. Lehman, Engineer of the department and others.

The convention by resolution, decided to request the various municipalities through which the canal passes to refer the question of compelling the owners or lessees of the canal to keep it in proper condition for transportation to the solicitors of the respective municipalities. These solicitors would then meet and determine just what action should be taken to protect the rights of the people in the canal. The resolution was referred to the chairman of the Legislative Committee to arrange with the various municipalities.

ORDER SCHUYLKILL DREDGED

Bulletin 8/27/19

Contracts Calling for $1,000,000 Work Awarded by U. S. Engineer

Contracts totalling $1,000,000 have been awarded by Colonel W. B. Ladue, U. S. engineer for this district, calling for the dredging of the Schuylkill river.

Completion of the work will allow of ocean-going steamers navigating the Schuylkill with 20,000 ton cargoes as far upstream as Passyunk av.

The contract calls for the removal of 2,500,000 cubic yards of mud from the river bottom from the back channel at the Navy yard to a point 800 feet above the Harrison Paint Works, a total distance of five and one-half miles. The award was made to the American Dredging Company, of this city, and the Maryland Dredging and Contracting Company, of Baltimore.

Hitherto steamships of heavy tonnage have been able to load only a portion of their cargo at Schuylkill river wharves before proceeding to deep water, where the remainder of the cargo would be taken on from lighters.

In addition to being deepened, the channel will be widened, and at flood tide will have a depth of 36 feet.

Above Passyunk av. it will have a depth of 26 feet as far as Bartram's Gardens, and above that the controlling depth will be 22 feet. The deeper section of the channel will be 300 feet wide. The 26 and 22 foot sections will be 200 feet wide.

FLOOD PREVENTION COSTLY

Record —— 8/28/19

Methods Suggested for Reading May Entail Expense of Million.

Harrisburg, Aug. 27.—A series of suggestions for prevention of floods at Reading, prepared at the request of the Mayor, was made public today by the State Water Supply Commission, including changes in the Schuylkill River and other streams and along banks which would cost from $500,000 to $1,000,000.

Control by dams and retarding basins is dismissed as impracticable by the commission, which states that some of the best sites are occupied by railroads. The Tulpehocken, which enters the Schuylkill at Reading, is well adapted for dams, but its drainage area is not extensive and it would be more valuable for water storage for industrial purposes. Straightening of the river below Reading also would be expensive.

The methods of flood control which appear feasible are given in the report as enlargement of the river channel by excavation, construction of a concrete wall and a levee along the east bank and a combination of the three methods.

HAVE NO DELEGATES RELATIVE TO CANAL

Norristown Times 12/5/19

Towns, and Manufacturing Concerns Not Manifesting Deep Interest

While Phoenixville and other municipalities and business interests up the Schuylkill Valley have named one or more representatives to accompany the special delegation bound for Washington on Sunday to present the condition of the Schuylkill Canal as a means of transportation of supplies to the Waterways Commission, interest in the matter has not been manifest by any of the municipalities in this immediate vicinity or by the manufacturing interests of the lower valley.

As a matter of fact nothing bearing on the advocating of the use of the canal in the present industrial and commercial crisis has been formally given consideration by the Town Councils of Norristown, Bridgeport or Conshohocken. The relative importance of the canal as a source of supply to the boroughs has been at such a low ebb for some years as to be removed as a factor.

Inquiry this morning developed the fact that the matter had not been brought to the attention of the manufacturing interests of this community and that therefore, either individually or concerted, no action had been taken in the premises. The re-establishment of the canal to the base of the coal supply had passed hope, so far as local industrial establishments were concerned, though such manner of supply would be a matter of decided advantage in many respects. Just what will be done at this late hour is not clear, but in all probability a step will be taken that will serve to give voice to the interests of the communities hereabout in the early re-establishment of the canal.

CANAL BOOMERS BACK

Rdg Eagle 12/10/19

WILL START CRUSADE SOON IN BEHALF OF SCHUYLKILL WATERWAY.

The Reading and Schuylkill delegation to the inland waterways convention in Washington has returned after completing an organization to boost the reconstruction of the Schuylkill canal all the way from the coal regions to Philadelphia. The executive committee of the new organization, of which J. W. H. Glass, this city, is chairman, will meet shortly to begin a crusade all through the Schuylkill Valley in behalf of the canal.

The other members of the committee are J. H. Zerbey, Pottsville; E. A. Markley, Phoenixville, and W. L. Binder, Pottstown. The Campbell bill now before Congress, which allows $100,000,000 annually for five years for rivers and harbors, includes $18,000,000 for the canalization of rivers. The canals specifically named are the Schuylkill, Cape Cod, Delaware and Raritan, Chesapeake and Delaware and the Lehigh canal and a proposed waterway from Norfolk, Va., to Fernandina, Fla.

MANY COMPLAINTS.

A survey had been prepared by Arthur Morgan, flood control engineer, of Dayton, O., which contained the recommendations.

When the commission made certain alterations in the pier and abutment plans of the bridge erected by the Carpenter Steel Co. over the river at Reading it acted under the authority of the act of 1913. This act simply provides that no changes or alterations can be made in a river channel without the approval of the commission.

The commission's action in the culm matter would be the same as that taken in the case of the Carpenter Steel Co. bridge. It would send an engineer to investigate whether the channel was sufficient to carry off the water at flood level without menace to property along the channel and would approve or reject on that basis.

At the present time there are complaints made by a number of cities along different streams concerning blocking of the channel. Bethlehem, the home city of Commissioner Lynch, has a river problem on its hands.

On the culm question no branch of the state government appears to be clothed with authority to do anything. Attempts to stop pollution of streams by culm deposits have failed to get anywhere in the courts.

CAVEN-HALL WATER PLANS COMPARED

Chamber of Commerce Shows Favorable and Unfavorable Factors in Proposals of Each

Public Ledger 10/30/23

COUNCIL CONSIDERS THEM

A comparison of the plans for water supplies as offered to Council by Councilman Charles B. Hall and Frank H. Caven, Director of Public Works, was made public today by the Chamber of Commerce.

It was prepared by Joseph F. Hasskarl, former Director of Wharves, Docks and Ferries, consulting engineer and chairman of the Harbor and Navigation Committee of the chamber.

The Hall "three-step plan" requires eight years and costs $135,000,000 and is based on the findings of four engineers appointed by Mayor Moore to investigate water supplies.

It proposes to establish reservoirs on the Perkiomen, Tohickon and Neshaminy watersheds, having a total capacity of 120,000,000,000 gallons, with pumping stations on the Delaware river near Yardley and other points of vantage.

The Caven plan embodies a suggestion drawn by Fred C. Dunlap chief of the Bureau of Water, and proposes the construction of a single, 600,000,000,000-gallon reservoir on the Neshaminy and a pumping station at Yardley, at a cost of $60,000,000, plus $28,000,000 in improvements to filters and other work which will be necessary regardless of the plan selected. Mr. Hasskarl's summary follows:

"Favorable factors in the Hall plan:

1. For more than fifty years the Perkiomen, Tohickon and Neshaminy water sheds have been pointed out as external sources of water supply by the different boards of engineers and commissions appointed to investigate this subject.

2. This project is susceptible of progressive, or gradual development as conditions require or means permit.

3. Each unit, or part could be put to full use as soon as it was completed, and operated independently as long as desired and eventually it would become an integral part of the whole project.

5. It permits the continued use of millions of dollars' worth of filter beds, pumping stations and other necessary plants now in use and in good condition.

5. It would give much needed relief to that section of the city supplied by water from the Schuylkill river as soon as the first unit (Green Lane Reservoir) was completed, by stabilizing, and greatly increasing the dry weather flow of that stream, thereby diluting the trade wastes which make this water so objectionable at times; thus minimizing that danger and objection, all of which would tend to greatly improve the quality of the water.

6. It would give the city practical control and State protection over sparsely settled water sheds yielding about 400,000,000 gallons daily; thus leaving only a small portion of the city's water supply to be taken from the Delaware river, and which could be greatly increased in later years as found necessary.

7. It would bring water to the city from several different sources in separate aqueducts far removed from one another, each operated as an independent unit, or plant.

8. The six reservoirs would have a storage capacity of 120,000,000,000 gallons, which is enough to supply the city for many months, and give ample time for sedimentation, thus greatly improving the quality of the water, and materially lessening the work done by the filters.

All the water drawn from the reservoirs would come to the pumping stations in Philadelphia by gravity. Their great size would insure an abundant supply at all times and would make it unnecessary to pump or draw from the Delaware river near Yardley during the rainy seasons and early spring when the snow melts.

Unfavorable Factors in the Hall Plan:

1. The Schuylkill would continue to be used for part of the city's water supply until the second part of the project has been completed.

2. The Delaware river would continue to be used for part of the city's water supply until the third part of the project has been completed.

3. This project would, perhaps, cost $30,000,000 more than the other, or second project, if that one should prove feasible.

"Favaroble factors in the Caven plan:

1. This project would cost perhaps $30,000,000 less than the Perkiomen, Tohickon, Neshaminy and Delaware project.

2. It would furnish water of good quality.

3. Few engineering difficulties would be encountered in its execution.

4. The complete abandonment of the Schuylkill river as a course of water supply when this project has been completed.

5. No purchase, or settlement, necessary with the Schuylkill Navigation Company for property acquired, rights or privileges, as none would be required.

6. Five less reservoirs and dams to be cared for.

7. The aqueducts from the Neshaminy would be shorter than those from the Perkiomen.

"Unfavorable factors in the Caven plan:

1. The project calls for the erection of a 600,000,000 gallon daily pumping station on the Delaware river, near Yardley.

Carefully kept records show that during severe droughts there were times when the entire flow of the Delaware river was considerably less than 600,000,000 gallons per day at that point.

2. According to a legal opinion rendered by City Solicitor Kinsley in 1898, Philadelphia could take from the Delaware river, above Trenton, "only half of the flow of the stream, provided it would not thereby interfere with the use of the stream for navigation and other purposes."

3. At present some of the water from the Delaware river above Trenton is diverted into the Delaware-Raritan Canal.

If the larger, or ship canal, connecting the Delaware with the Raritan is ever constructed according to present plans, and all shipping interests hope this will be done soon, a much greater volume of water, estimated by some engineers as from 100,000,000 to 200,000,000 gallons daily, will be drawn from the Delaware river above Trenton, for that purpose; thus materially reducing the quantity available for Philadelphia, especially at times of low stream flow.

4. New York city has been making surveys and borings for a reservoir on the Neversink river, a branch of the Delaware river near Port Jervis. If this is even constructed it will further diminish the stream flow of the Delaware river at time of low water.

5. The Metropolitan Water District of New Jersey has, for some time, been considering taking water from the Delaware river at Belvidere. If this project should ever be executed it would materially reduce the supply available for Philadelphia.

6. The Delaware River is an inter-State stream and therefore it is doubtful if any large quantity of water could be drawn from it without the consent of the State of New Jersey. Past experience shows that it usually requires many years to obtain the necessary concurrent legislation for such a project; as an illustration, New York City abandoned the Housatonic as a source of water supply, owing to the inter-State difficulties and instead took water from the Catskill Mountains, a much more expensive project.

7. This project proposes concentrating upon the Queen Lane pumping station by enlarging the same to capacity of 350,000,000 gallons per day, and then abandon the Belmont and Shawmont stations, which, for many years, have supplied large sections of the city. Such procedure would expose a large part of the city to an unnecessary hazrd as it is not so very unusual for pumping stations to be damaged or wrecked, or put out of commission from one cause or another.

8. There is no assurance that in years to come the Delaware river above Trenton may not also be seriously polluted by trade wastes from the rapidly growing cities, towns and industrial plants along the shores and on its tributaries.

9. This entire project will, in all probability, cost much more than the $60,000,000 estimated, especially if the cost of all enlargements and improvements necessary to complete the same are added to the above figure, and it will not give relief, or better quality of water until all the work has been practically completed.

NO BOATING THIS SUMMER

3/21/20.

THAT IS THE CANAL OUTLOOK AT PRESENT TIME

The flood in the Schuylkill north of Reading has put a damper on boating. The dams are full of mud and culm and the channels effectually closed and some locks damaged. Some of the people living along the river say that it will be impossible to clear them and get them in shape for navigation for at least three months. Thousands of tons of culm were washed down the stream from the deposits north of Port Clinton, and the black substance can be seen all along the stream, especially where the water overflowed its banks. It is said that considerable damage was sustained by property owners.

It is more than likely that not a boat from the coal regions will pass down the canal during the coming summer. Those who have been watching events for years are of the opinion that the days of the canal, between the coal regions and this city, are over forever as far as boating is concerned.

The business has been growing less and less each year and last week's freshet may be the final act in the business tragedy of this great waterway.

The agitation now on to have Congress take hold of the canal appears to be about the only thing that will save it.

Income from Water Power.

The Schuylkill Navigation Co. does not appear to be much concerned about the matter. Even if boating is abandoned, the corporation will still have an excellent income from the water power which it sells between the big dam below this city and Philadelphia. There are now a number of electric power plants using the river and canal and more will follow year by year. All must get permission from and pay rental to the navigation company.

Trees Are Barked.

The huge chunks of ice striking the trees along the banks during the recent freshet ground the bark from nearly all of them. The trees present an odd sight. People going over the Penn street bridge are attracted by the unusual appearance of the trees.

CANAL MEETING WAS A FINE ONE

Congressman Watson In His Address Promised His Support To The Movement

Daily Republican
Phoenixville

BOROUGH WILL BE ASKED TO CO-OPERATE

3/22/20

A convention of the Schuylkill Canal Improvement Association was held at the Borough Hall on Saturday afternoon with a good attendance of representative business and professional men of the different towns in the Schuylkill Valley, and the generally expressed opinion was that the meeting was a very successful one and was sure to result in good for the community.

The meeting was called to order by E. A. Barkley, second vice-president and the Invocation was given by the Rev. George N. Hertzog, of the First Presbyterian Church, who prayed for divine blessing on the meeting and the work being done of the community as a whole.

Burgess Thomas J. O'Brien followed in a short welcoming address and John Haviland, Esq., was introduced, to speak on the subject, "Relation of the Canal to Phoenixville". The speaker told of the benefit which would result to this town in the reopening of the Canal to traffic, and of the handicap under which the Borough now labored in being obliged to haul supplies of coal and coke for the pumping station at Cromby, at a considerable added expense to the taxpayers. The Schuylkill Navigation Company was chartered in 1815, and the Co. was virtually made master of the waters. If it fails to use its power, or should make an abuse of the same, the charter can be revoked, and abandonment causes the corporate right to revert to the grantors in this case, the State Legislature. The interests of the people must be safeguarded and the speaker felt that a bill should be introduced at Harrisburg, asking the State to take over the Canal, as the interests of the people at large are of more importance than those of a few.

Mr. Barkley spoke briefly from the point of both the financial and sentimental sides of the question, and asked if the Canal had a commercial value, and answered this by saying that if not valuable in that way, the Reading Co. would not have taken it over.

"But must we only look at the dollar side; have the people no rights, in a sentimental way? They did not stop to think of that when a beautiful lake at Valley Forge was destroyed. Let us introduce some sentiment into the question, and look at the interests of the people instead if thinking only of the dollar, and forget the old fox-trot, the public be d—n"

J. H. Zerby, President of the Association, was introduced, and took charge of the meeting, M. J. C. Smoyer being asked to act as secretary in place of Mr .Binder, who was ill and unable to attend the meeting.

J. W. H. Glass was called on for the report of the Executive Committee, and gave a verbal resume of work done.

Gilbert R. Fox, Esq., of the Resolution Committee, had no report.

The president's address covered the forming of the Canal Improvement Association, in Washington, D. C., in December, 1915, and Mr. Glass followed this up by giving a history of the Canal, chartered in 1815, when such matters were not as well regulated as now. Stock sold at a par value of $50 per share, but afterward sold at times as high as $180. He then went on to advise that the legal aspect of the question be looked into and suggested that the matter be laid before the Public Service Commission Have the farmer take the matter up, as many acres of fertile land are annually destroyed by culm from the mines

Burd S. Patterson, Secretary of the Pittsburgh and Lake Erie Canal Co., gave an interesting talk on the forming of the different Associations for the improvement of the great waterways of the State and Nation. He spoke of the coal shortage and urged the use of water routes, not only as a cheaper means of transportation, but also for the purpose of hastening the moving of freight, as the railroads are congested and have about reached the limit of their facilities for expansion.

"Fourteen million tons of coal were taken down the Monongehela River, at a cost to the shippers of thirteen cents per ton, while the railroads charged eighty cents. Railroads would not be harmed by the use of the waterways, but helped."

Mr. Patterson also advocated an appeal to the Public Service Commission of the State, and also to the National Government, if necessary.

Hon. W. H. Watson, a representative in Congress from Montgomery County, who had prepared a bill for submission to Congress, appropriating $5,000 for a survey of the canal, was the next speaker. He had a copy of the proposed bill, with him and this was referred to Mr. Fox, of the Resolutions Committee for approval or change,as might be thought desirable, but the only suggestion made was that the amount asked for be increased to $10,000 and with this change, Congressman Watson promised to introduce the bill to-day. He spoke of the need of water ways to supplement the railroads of the country as a means of transportation and also spoke on the subject of the improved roads as a means toward this end, but these are often in bad condition and we must look to the airplanes and the waterways to help out.

CULM REMOVAL UP TO THE CITY

July 20 '20

COMPLAINT FROM READING NOT YET RECEIVED BY STATE AUTHORITIES

Harrisburg, July 20 (Special).—The state water supply commission has no authority to remove culm deposits which are blocking the Schuylkill River near Reading, according to Thomas J. Lynch, secretary of the commission.

No official complaint has been filed yet with the commission by Reading city officials, but members of the commission have been keeping themselves informed on the situation by Reading newspaper accounts of the affair.

"It is a matter solely for the city," said Secretary Lynch today, "and it is a big problem, which probably will mean excavation of the channel and construction of dikes. The only function which the commission can exercise is to examine any plans which may be prepared by the city and approve or reject them."

Commissioner Lynch says that some time ago the commission sent a report to the city of Reading, informing Council what would have to be done for the protection of the river channel.

DETERMINED TO OPEN THE CANAL

Reading Eagle

BILL PROVIDES $10,000 FOR STATE SURVEY

March 14 '20

Addresses by state and national officials, in which they promised to support the project, were heard at a conference of the members of the Schuylkill Canal Improvement Association, held at Phoenixville Saturday afternoon. The association hopes to have the Schuylkill canal restored to its former state of usefulness as an inland waterway, direct from the anthracite coal fields to Philadelphia.

Cities and boroughs along the entire length of the canal have been interested in the plan, and at the Saturday meeting a resolution was passed, calling upon all cities and towns to appoint their solicitors members of the executive committee to work with Attorney Gilbert R. Fox, of Norristown, and prepare legislation to be presented at the next session of the state Legislature.

TO FIGHT TO A FINISH.

Congressman Henry G. Watson, of the Bucks-Montgomery district, was present at the hearing. He has prepared a bill calling for a survey of the canal by the state and providing $10,000 for the work. His bill includes a request to the government to furnish funds for the rebuilding of the canal. Mr. Watson declared he is going to fight to the finish in an effort to have the canal again put in operation.

George M. Lehman, engineer, of the Department of Internal Affairs, Harrisburg, declared that in 1918 he made a survey of the canal for the government. "If the war had not closed," he said, "the government would have at once taken over the canal and opened it for traffic, for the officials were after some sure method of bringing coal to a port.

State Senator T. Larry Eyre, of Chester county, expressed the thought that there was no doubt but that the Schuylkill Navigation Co. charter had been violated. "I am ready to help you put this through," he said.

James H. Craig, deputy secretary, Department of Internal Affairs, spoke briefly, endorsing the work.

In the near future, it was announced, the matter will be taken before the state public service commission.

COUNCILMANIC ENDORSEMENT DESIRED.

In the meantime, however, the most important work is that of having council members in towns along the canal endorse the plan of having it put in service and have their solicitors consult with Mr. Fox, at Norristown.

The next meeting will be called by J. W. H. Glass, vice-president and chairman of the executive committee. It will likely be held at Norristown.

Members of the Phoenixville council were hosts on Saturday and entertained the visitors who attended the conference. None of the city officials of Reading were present. E. A. Barkley, second vice-president, presided.

Mr. Glass expects to have a lecture delivered in Reading in the near future on the subject of the canal and the speaker will illustrate his address with lantern slides.

CANAL EXPERT TO SPEAK

Rdg Eagle 3/11/20

Wilfred H. Schoff, of Philadelphia, secretary and treasurer of the Atlantic Deeper Waterways Association, will be the principal speaker at the Schuylkill Canal convention, to be held at Phoenixville on Saturday, March 20. Mayor Moore, of Philadelphia, is president of that organization. The two had a conference in regard to the matter. Both are in favor of the movement to have the government improve the Schuylkill waterway. Mr. Schoff's address will be illustrated, showing the importance of the canal as a link in the deeper waterway idea. Two years ago the government asked him to make a thorough examination of the Schuylkill. He did so in connection with an engineer. They gave a favorable recommendation. At that time the government had control of the railroads and it would have been a simple matter to have taken over the canal. It will be more difficult now.

E. P. Albrecht, president of the Philadelphia Bourse, an official of the National Rivers and Harbors Congress, may attend the canal conference. He is in favor of the movement.

J. W. H. Glass, first vice president and chairman of the executive committee of the Schuylkill Canal Improvement Association, is trying to have Mr. Schoff deliver his illustrated address in this city.

CANAL RE-OPENING PLAN

3/18/20

Congressman Watson Will Address Meeting in Phoenixville

Active preparations are being made for the meeting in the interests of the re-opening of the Schuylkill Canal which will be held in Phoenixville next Saturday and a good program of speaking has been prepared.

Congressman Henry W. Watson of Montgomery County has sent a definite acceptance of an invitation to address the meeting and others who are expected are Dr. D. C. Gray, vice president of the Inland Waterways Association, Pittsburgh; James H. Craig, Deputy Secretary of Internal Affairs, at Harrisburg; W. Schoof, secretary and treasurer of the Atlantic Deep Waterways Association, Philadelphia; E. T. Albrecht, president of the Philadelphia Bourse and John K. Stauffer, Mayor of Reading.

WANTS SURVEY OF SCHUYLKILL CANAL

Watson Introduces Bill in House, Seeking to Restore Utility of Phila. Waterway

Special Dispatch to The North American

WASHINGTON, March 13.—In hope that the Schuylkill canal between the anthracite districts of Pennsylvania and the port of Philadelphia may be restored to its former utility, Representative Watson introduced into the house today a bill providing for a government survey of that waterway.

The railroad bill recently passed, Representative Watson pointed out, prohibits the extension of railroad lines or the construction of new lines without permission by the interstate commerce commission. This, in Mr. Watson's opinion, will prevent numberless constructive enterprises,which the railroad owners would undertake Hence the development of inland waterways is now moer necessary than ever.

"If we allow the waterways to be strangled," said Representative Watson, "we enfeeble our commerce and lessen the output of our industries. Waterways may soon become the leading carriers of freight. Associations have been organized for the purpose of reconstructing canals, with government aid. One of them is the Schuylkill Canal Improvement Association, in support of whose efforts to reopen the Schuylkill canal I have introduced this bill."

COAL DUST IN RIVER ILLEGAL

BUT THIS LAW NEVER HAS BEEN ENFORCED

1916 REPORT OF STATE WATER SUPPLY COMMISSION SHOWS HOW SCHUYLKILL VALLEY HAS BEEN MARRED.

Harrisburg, July 30 (Special).—The state water supply commission has not yet received the apppeal from the city of Reading asking for action to prevent the Schuylkill River from being further clogged up with coal dust.

In the absence of Thomas J. Lynch, secretary of the commission, no definite statement as to what would be done in the matter could be obtained. It was said, however, that the usual procedure in a case of this kind is to send an investigator to the scene and if he finds conditions such as to endanger the navigation or the health of the surrounding community action will be taken against the parties responsible to discontinue their practice of dumping coal dust into the river and that steps will be taken to remove the sediment in the bed.

In spite of this assertion, there is not much likelihood that any vigorous action to eliminate the evil will be taken. There is a law on the statute books, approved June 27,

(Continued on Eighth Page.)

COAL DUST IN RIVER ILLEGAL

(Continued From First Page.)

1913, which makes it a misdemeanor for anyone to dump, or allow to be dumped, coal dust into the streams of the state. But this law has never been enforced.

STATE HAS NO AUTHORITY.

The reason for this lack of enforcement, as explained in a report prepared by the water supply commission in 1916, is "that to no state department has the duty of enforcement been delegated. More than this," the report continues, "legislation so drastic, affecting as it does the operating conditions of a large and valuable industry, should be interpreted only after thorough consideration and with accurate knowledge of conditions.

"Practical alternatives should be found before the mining companies are forced to discontinue their present practice.

"The act, if rigidly enforced, would perhaps result in benefit to the anthracite region and to riparian owners on the water courses leading therefrom, but it does not provide for purification of streams to such an extent that they could be used for water supply, as it specifically permits the discharge into the streams of mine water carrying sulphuric acid and other impurities.

"Where streams receive sewage, mine water may be beneficial and act as a germicide or neutralizing agent, but where they are pure, both mine water and mine refuse should, so far as possible, be excluded. Mine water, with its acid increment is unfit for domestic use and steam generation and near the mine, destroys fish life. Dilution, due to increased volume received from tributaries, reduces the acidity, and each of the rivers into which acid water is discharged passes through limestone areas that exert neutralizing influences.

UP TO THE MINING COMPANIES.

"We recommend the enforcement of the act by alternative methods, in individual cases, at the option of the mining companies, subject to approval by the water supply commission, and suggest that hydraulic mine filling be adopted wherever geological and mining conditions make it feasible; also that in portions of the field, where the workings are on a pitch too steep to make this practicable, settling basins or other suitable provisions be made to remove the solids, and the effluent then be passed through well constructed filters, as is now the practice at a number of collieries in the Schuylkill region.

"The act, passed by the Legislature after realizing the tremendous waste of natural resources by pollution of the water courses, the damage to farm land and the other consequences of overflow, by material, which, if properly used, would increase the ultimate yield of the anthracite fields, provides:

"'That it shall be unlawful for any person, partnership or corporation to place or discharge, or permit to be placed or discharged, in or into any of the running streams of this state, any anthracite coal, anthracite culm, or refuse from anthracite coal mine; or to deposit any such coal, or culm, or refuse upon the banks of such stream, where the same would be likely to slide into or be washed into such stream. Provided, however, that this act shall not apply to waters pumped or flowing from coal mines where the coal or culm or refuse have been removed therefrom; or shall not prevent the discharge of sewerage from any public sewer, owned or maintained by any municipality of this commonwealth.

PENALTIES PROVIDED.

"'Any person, firm or corporation violating the provisions of this act shall be deemed guilty of a misdemeanor and shall, upon conviction, be punished by a fine of $100 for each offense, and a further fine of $50 per day for each day the offense is maintained, or be imprisoned not exceeding one month, or both, at the discretion of the court.'

Treating on the general subject of culm in the streams of the anthracite region, the water supply commission's report says:

"From 25,000,000 to 35,000,000 tons of coal are produced annually by what is known as the "wet process," a process that has resulted in the most serious contamination of the streams that run through or have their source in the anthracite region of Pennsylvania. In this production, about 40,000,000,000 gallons of water carrying 10,000,000 tons of fine culm are discharged into the water courses direct, flushed into the mines, or disposed of by various means on the surface. The extent to which the very small sizes of anthracite have been deposited in the streams draining the coal fields is made evident by the fact that over a quarter of a million tons, designated generally as river coal or culm, are recovered annually from the river beds by coal washing operations.

660 MILES OF WATERWAY USELESS.

"The contamination of the streams in the coal region has been in progress for more than 50 years, and it is estimated that there are now 660 miles of creeks and small streams which should be available for water supply but which are rendered useless for domestic and manufacturing purposes by the culm and sulphur water from the mines.

"The Schuylkill River from its source to the Delaware River, the Lackawanna River from Forest City to its mouth, the North Branch of the Susquehanna from Pittston to Sunbury, the Susquehanna from Sunbury to Chesapeake Bay and the Lehigh River from a few miles below White Haven to the mouth, carry this weight from the anthracite region, an aggregate distance of 400 miles, subjecting thousands of acres of rich, alluvial flats within the flood zones to serious damage by the disposition of culm, white every year this detrital matter is extending further down stream. The effect of the coal disposition is shown by stretches of formerly rich farm land now abandoned to weeds and brush where such still grow. In some instances the lands are the property of the coal companies, and in a few cases where they are not so owned damages have been paid to the owners.

MINE WASTE AND RUIN.

"In the Hazleton, Schuylkill and other regions, many creeks have been so loaded with culm that they have spread over the entire valley bottoms, killing standing timber and all other vegetation. The beds of the rivers are clogged with mine waste deposited in eddies behind bridge piers and below islands, and pools above dams have become so filled with this material that their efficiency is impaired.

"The presence of mine waste in water courses is due to two causes, both within the control of the mining companies:

"First—The disposition of culm and mine waste on low ground where it is subject to overflow and s washed into the streams by the swift current of spring floods. This has been such a common practice along the Lackawanna River for probably 50 years that the stream bed is filled with mine refuse to a depth of from two to six feet, and a bar has formed at its mouth that extends over 300 feet into the Susquehanna River for a half mile down stream.

"Second—The discharge into the streams of culm bearing water from the coal washing operations, from which much damage resulted during earlier years when most of the slash passed into the nearest water courses, a practice generally followed until the value of much of the material previously thrown away was discovered.

"This mine waste, when properly handled and placed, is of value to the mining industry in extinguishing mine fires, arresting "squeezes" and protecting the surface from "caves," thus increasing the ultimate yield. Some companies are either flushing this waste material into mines or storing it on the surface for future use, but the streams are still receiving a quantity sufficient to render them useless for water supply, to impair their value for manufacturing purposes and to fill up their channels so that overflow is frequent.

FLOOD SEASON WORST.

"Along the smaller streams, where the current is rapid, the water is black and the culm is carried in suspension and deposited in the larger creeks and rivers, but where the flow is sluggish, culm settles quickly and is carried to the main watercourses only during freshets. For this reason streams that at low water are most clear may carry a large quantity of culm in times of high water and do more local damage to surrounding territory than those which regularly discharge their burden into the rivers. Frequently during floods the great deposits that have been accumulated at the mouths of tributaries are washed down stream.

"It is probable that the Schuylkill River may not be fit for use in the next 150 years."

As regards the Schuylkill River in particular, the report states:

SCHUYLKILL DRAINS THREE-FOURTHS OF COAL FIELD.

"The Schuylkill River, with its principal tributaries, Mill Creek, Norwegian Creek, the West Branch and the Little Schuylkill, drains about three-fourths of the southern coal field. Mine water from an old drift near Tuscarora is the source of the main stream and 11 tributaries above Port Clinton, including every stream of importance, contain sulphur water, while five of them are loaded with culm.

"The Schuylkill River passes out of the coal measures just south of Pottsville. Above Port Carbon the water shed is steep, the channel narrow and the current swift, with little opportunity for the deposit of culm, except in occasional eddies. Below this point the gradient is less, the stream more sluggish and the flood area greater. Between Schuylkill Haven and Reading frequent dams of the Schuylkill Navigation Co. form along stretches of slack water, where culm is deposited.

"In addition to an annual recovery of 60,000 tons of merchantable coal by 17 dredges operating in pools, where the deposits of culm are from six to eight feet deep, quantities of silt are removed by the navigation company in keeping the channels of the canal and river open. Below Reading the water is comparatively clear, except in time of flood, when it is black as far as Philadelphia.

"The flood areas at Schuylkill Haven, Landingville, Auburn, Hamburg and Shoemakersville show deposits of culm in varying amounts on the flats. In some cases the culm has ruined rich farm land, besides filling up the river channel and increasing the flood damage."

CANAL FILLING ABOVE READING

LAST COAL BOAT MAY HAVE PASSED DOWN

R de Forest. 8/12/19

There will be no boating on the Schuylkill canal north of this city this season according to information gathered from sources along that stream. After the hardest kind of work the men employed on the dredge now working between this city and Highs farm, the channel has been opened about three miles above Haines' lock. North of Highs farm, the stream is in bad shape, the sand and culm in some places being three feet above the surface of the water. It is claimed that it will be impossible to clear the channel this year. The recent heavy rains clogged up the stream north of Reading and the indications are that navigation may not be resumed above Reading for some time. It seems that every time there is a flood in the Schuylkill conditions become worse. This will be the first season since the opening of the canal that a boat failed to get through.

There is a feeling that the Reading Railway Co., the owner, is not very anxious to open the canal, judging by the small dredging force. It is among the possibilities that the last boat load of coal has passed down the stream. Conditions above Reading get worse every year because of the culm which the coal companies allowed to be washed into the stream.

Those who profess to know say that the canal is profitable even if no boats are operated. The company receives a large revenue from the water rights between this city and Philadelphia.

SCHUYLKILL CANAL ONCE A PAYING PROPOSITION

Reading Eagle 1/18/20

SHARES, $50 PAR, SOLD FOR $180 IN ITS PALMY DAYS

Statistics which show that in days gone by the Schuylkill canal was a well paying enterprise have been embodied in a brief history of the canal prepared by J. W. H. Glass, chairman of the executive committee of the Schuylkill Canal Improvement Association, which next Wednesday, Jan. 21, will hold its first annual one-day convention at the Berkshire Hotel, Reading.

Mr. Glass declares that at one time stock in the company, which had a par value of $50, sold for $175 and $180 and that the dividends were large.

WILLIAM PENN'S IDEA.

His article follows: "Over 130 years after William Penn suggested the idea of canalizing inland waterways, the Schuylkill canal was completed and put into successful operation. That event marked the first completed navigation enterprise in the country. Although the Union Canal Co., of Pennsylvania, was chartered April 2, 1811, nearly four years before the Schuylkill Canal and Navigation Co., it was not completed until 1828, six years later than the Schuylkill. Through her enterprising and public spirited citizens, these great internal improvements in this country were projected in Pennsylvania.

"The success of the Schuylkill Canal gave an impetus to other improvements. The popular will necessitated Gov. John Andrew Shulz, of Berks county, to yield to a loan of $6,000,000 before the close of his second term.

EARLY CONSTRUCTION.

"The energy and aggressiveness which the commissioners showed made possible the early construction of the canal. Incorporated on March 8, 1815, subscription books were opened on May 1, 1815. The par value of a share of stock was fixed at $50, with Reading subscribing one-quarter of the total shares of $500,000. The construction of the canal was begun in 1817 and completed in 1822.

"The total length from the coal regions to Philadelphia was 105 miles, 62 miles of canal and 43 miles of pool in river, with a fall of 588 feet, including 120 locks, 81 above Reading and 39 below; 28 dams and 17 arched stone aqueducts. The total cost was $1,800,000. In 1827-28 the canal was extended, and by an enlargement in 1846, the number of locks was reduced to 71, with a total fall of about 620 feet. The size of the locks was 18 by 110 feet; three width of canal, 60 feet, depth of water, six feet. The capacity of the boats was 180 tons.

"Rapid strides were made. From having boats towed by men, then drawn by one horse, in 1824, to steamboats in 1826, and steam packets in 1846, were notable steps in the development of the canal.

"With man power locomotion a trip from Port Carbon to Philadelphia and back generally required six weeks; in 1858 a trip from Port Carbon to New York and return was made in seven days.

TRANSPORT COSTS CUT.

"By means of the canal, cost of transportation was greatly reduced. From 40 cents per 100 weight by land, from Reading to Philadelphia, the cost was reduced to 12½ cents by canal. Traffic gained greater proportions from year to year. In 1826 the total tonnage descending was 25,561 and ascending 6,843, with total tolls received $43,108. Five years later, in 1830, the total descending was 136,531 tons, ascending 44,254, with total tolls $148,165.

"Various commodities were transported over the canal, lumber, grain, flour, coal, iron ore, iron, whisky, etc. With ever-increasing traffic, ample dividends were made, and shares, which cost originally $50, were sold as high as $175 and even $180.

"In 1842 over 500,000 tons passed down the canal and the tolls were over $400,000. In 1851 the total tonnage was 842,097 tons, of which there were 579,156 tons of coal, and the total toll was $285,621. After 1861 the canal tonnage reached 1,400,000 tons of coal and 300,000 tons of merchandise and other articles. The capacity of the canal is estimated at 1,800,000 tons descending and at least 500,000 tons ascending.

COULD SAVE MILLIONS.

"It can readily be seen that millions of dollars can be saved by transporting of coal alone. With the Schuylkill canal navigable and in service it would materially aid in the reduction of the high cost of living, relieve congestion of the railroads and afford the government ready means of safely loading vessels with coal in time of war, or maritime and shipping expansion.

"The Schuylkill Canal Navigation Co. continued to operate this great enterprise till 1870, then they leased it to the Philadelphia and Reading Railway for a term of 999 years, with the result that gradually efforts are now being made by the company to abandon the canal and its usefulness."

PROSPECTS FOR CANAL BRIGHT

Rdg. Herald Telegram 4/28/20

GLASS TALKS TO M. C.S'

J. W. H. Class returned from Washington full of enthusiasm as to the possibilities of again having the Schuylkill canal in full operation.

There were hearings on several bills before the house river and harbor committe, touching on this question. One carries with it an appropriation of $18,000,000 annually for 5 years and would be used to provde better facilities on the canals in the eastern section, including the Schuylkill.

$10,000 FOR A SURVEY.

The Watson bill was also given a hearing. This carries a provision of $10,000 for a survey of the Schuylkill canal, to determine the cost of providing a channel to accomodate barges requiring 10 feet of water. This bill seems almost sure of adoption.

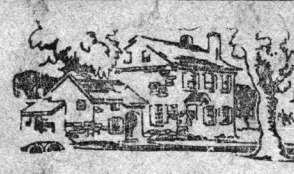
City solicitors of cities to be benefited will have a conference shortly and take the subject to the public service commission, which will be asked to compel the railroad to conform to charter requirements or allow the state to take possession.

HOW IT WILL BENEFIT.

At the meetings of the committee Mr. Glass was the main speaker. He told of the advantage and improvement the section along the canal would realize if the proposition carries. He declared it would assist materially in bringing down the high cost of living. It is not the purpose of the movement to fght the railroads, but to supplement them.

Had the canal been navigatable, he declared, there would have been fewer disastrous results from the railroad strike felt in this section. The industries would not have been inconvenienced as greatly as they were. The project, he declared, would bnefit the whole eastern part of the country.

The idea is that bulk freight at a low rate will be handled by the canal, leaving the better grade of freight to the railroads.



UP AND DOWN MONTGOMERY COUNTY

Manayunk Bridge Disasters Of Bygone Years

While not so venerable in aspect as the DeKalb street bridge, nevertheless the Manayunk bridge has been declared an antique of uncertain stability. A Montgomery County grand jury, in September, 1921, urged that it be replaced with a new structure. And now a bill has been introduced in the City Council of Philadelphia making provision for the cooperation of the city authorities with the Commissioners of Montgomery County in building a new bridge over the Schuylkill at Manayunk.

The first Schuylkill River bridge touching Montgomery County was built at Manayunk in 1810. This was also the second Schuylkill River bridge touching Philadelphia County. But that bridge of 1810 did not stand where the bridge now the subject of discussion stands. The present bridge is at Green lane. The first bridge was about a mile farther up the river, and was called the Flat Rock bridge. It was a half

Part of the Flat Rock bridge collapsed in 1824 under the weight of several wagons hauling marble from the Whitemarsh quarries. It was rebuilt, and just as it was nearly completed a freshet occurred and piled such a mass of logs, trees and other debris against the bridge that the structure was carried down the stream. Once more it was rebuilt. This time it stood until the great freshet of 1850, which swept away the Conshohocken bridge. The bridge went down the Schuylkill almost intact and the collision with the Flat Rock bridge wrecked that structure. It was not replaced.

In 1833 the first bridge at Green lane was built, it being constructed by a corporation which derived a revenue by the collection of toll from passengere crossing the bridge. The spot where the bridge was located had been a ferry from the time of the first settlement of the region, the road on the west side leading toward the Welsh settlements of Merion. From the name of an early landowner, it was called Righter's ferry.

The freshet of 1850, which wrecked the Conshohocken and the Flat Rock bridges, also caused great damage to the Green lane bridge. A covered bridge was then built, and this remained until swept away in a great flood in 1869. The swift water carried a canalboat-load of coal out of the canal at Manayunk and hurled it against the bridge, which tumbled down into the water. A boy, the only person on the boat, perished.

The bridge built after the disaster of 1869 was freed of tolls in 1892, and since then Philadelphia and Montgomery County have been the joint owners.

* * *

Several times within the past twenty years it has been proposed to build a bridge over the Schuylkill some distance north of Manayunk, for a direct route between Lower Merion and Chestnut Hill. The Manayunk bridge is not convenient for this purpose owing to the high hills on the Manayunk side, which so far have prevented the construction of roads appealing to long-distance motorcar travelers. From lower Montgomery County or the Chestnut Hill and Germantown region of Philadelphia, motorcars bound for Lower Merion must either go south to the Falls of Schuylkill bridge or north to the Conshohocken bridge. It was understood some years ago that Dr. George Woodward and other members of the Houston family, who own much land in Whitemarsh, Springfield and Chestnut Hill, were ready to contribute a large sum of money toward the construction of a bridge as part of a scheme for a boulevard connecting Chestnut Hill and Lower Merion.

NORRIS.

2-3-25

UP AND DOWN MONTGOMERY COUNTY

A New Bridge at Old Levering's Ferry

Philadelphia is now about ready to proceed, in co-operation with Montgomery county, in building a modern concrete bridge on the site of the Greenlane bridge over the Schuylkill at Manayunk. Negotiations as to this improvement have been in progress between the city and the county for four years.

The present steel truss bridge, built in 1870, is the third on this site and the fifth at Manayunk. The first bridge was built at Flat Rock, a mile north of Greenlane. That was in 1810. Following its destruction by a freshet, in 1824, the bridge had to be rebuilt. Another freshet in 1850 carried away this bridge and it was not replaced.

Meanwhile the borough of Manayunk had come into existence, on the northern banks of the Schuylkill, below Black Rock. Manayunk's development was due largely to the opening of the Schuylkill canal, a century ago. The name, an old Indian term originally applied to the Schuylkill river, was adopted in 1824, and in 1847 the community became a borough.

The first bridge at Greenlane was erected in 1823. Floods in the river, in 1850 and 1869 necessitated rebuilding. Tolls were collected until 1892.

* * *

Like most bridges over the Schuylkill, the Greenlane bridge was erected approximately at the site of an old ford and ferry. Levering's ferry, it was called, from a family that owned much land hereabouts, on both sides of the river.

Two brothers named Gerhart and Wichert Levering were the pioneer settlers of Roxborough township, which embraced the territory now included in Manayunk. It is said that these two were members of a family of twenty-one brothers, and that Wichert Levering lived to the age of 109 years.

The road in Lower Merion township that in early days led down to this ford and ferry was called Levering's Mill road. It was one of the first roads authorized by the courts of Montgomery county following the organization of the county, in 1784. Anthony Levering, in 1785, petitioned the court from the laying out of a road from Levering's ferry, past his mill to the Lancaster road, and the court complied with the request.

However, maps of an earlier date show a road leading down to the river at this spot, and it is said part of Washington's army crossed at Levering's ford and marched southwestward over this road through Lower Merion, on September 14, 1777. This was after the battle of Brandywine, when the army left its camp at Falls of Schuylkill with the hope of thwarting the efforts of the British to gain possession of Philadelphia.

* * *

Fragments of Levering's Mill road still have that name in Lower Merion, but the road no longer runs down to the Schuylkill, as it once did. The highway connecting with the Greenlane bridge, on the south side of the river is now called Belmont avenue.

A mile or so farther down the river City Line bridge marks another anciet road and ferry, but here also the old highway retaining the name of this landmark, namely, Righter's Ferry road, no longer finds its way down to the river. A road from Righter's ferry to Merion Meeting House was opened in 1706, and the ferry was authorized in 1741.

NORRIS.

FLOOD CONTROL PLANS DRAWN FOR SCHUYLKILL

$1,000,000 PROBABLE COST OF MAKING READING SAFE FROM HIGH WATER DAMAGE

Rdg Eagle 8/27/19

Harrisburg, Aug. 27 (Special).—That the expenditure of $1,000,000 would be required to afford Reading complete protection from flood damage, is the statement contained in suggestions for flood control plans for the Schuylkill River, issued by the state water supply commission.

Recently an engineer of the commission came to Reading and, accompanied by City Engineer Ulrich and other city officials, toured the river from above the north city boundary to below the southern city line. His report, which is highly illuminating, has just been given out.

Building of a concrete wall along the east bank of the river through Reading, the abandonment of the canal through the city, or the building of an earthen levee along the east bank are some of his suggestions.

Mayor Filbert Starts Movement.

Mayor Filbert precipitated the campaign to make safe the Schuylkill at Reading so that his city would be free from flood damage. He reported the matter to the commission and the latter took it up promptly. The mayor noticed the manner in which the river was filling with coal dirt and culm.

The report of the commission follows:

"The Schuylkill River at Reading has a drainage area of about 900 square miles, consisting largely of mountainous country. The mean annual rainfall is about 45 inches. In intensity and frequency of storm rainfalls this area very closely resembles southern Ohio, Indiana and Illinois. More or less dependable high water marks have been preserved of the more important floods for more than a hundred years.

"During the recent years accurate records of flow have been kept, and from these and from a knowledge of the characteristics of the river, estimates have been made of the discharges of the most important floods. The highest on record was that of September, 1850, the discharge of which is estimated to have been 80,000 cubic feet per second. In October, 1869, and on the last of February, 1902, floods occurred which reached within two feet of this extreme stage. The discharge on these occasions is estimated to have been about 70,000 cubic feet per second. The estimates of these early floods are probably much in error, but an examination of the topography of the watershed, and of the storm rainfall characteristics of the region lead me to believe that a flood might occur at Reading of 90,000 to 100,000 cubic feet per second, but that such floods would be very rare.

FLOODS 30 CITY BLOCKS.

"A flood like that of 1902 inundates all or parts of more than 30 city blocks, most of which are closely built up, and also covers many miles of main and side tracks of railroads within the city. A flood, two or three feet higher than this, which may occur, would cause a great deal more damage. Quite generally, a city in such a situation must actually go through the experience of a great flood before it will take account of its interest and be willing to pay for the necessary protection.

"In working out plans for flood prevention, sometimes the problem is very much simplified by the fact that only one method of improvement is possible. In other cases several entirely feasible methods present themselves, any one of which can be followed at an expense that is fully justified.

"Floods on the Schuylkill River at Reading can be controlled by either of two or three methods, and careful and detailed surveys and studies will be required to determine finally which is best and least costly. Any method of flood control will be expensive, and may cost more than would seem at present to be justified by the interests involved.

RETARDING BASINS IMPRACTICABLE.

"Control by dams and retarding basins may be dismissed at once as impracticable in this case. Most of the best sites for dams and for storage areas are occupied by railroads. The Tulpehocken Creek entering the Schuylkill from the west at Reading has apparently excellent dam sites and storage areas that are not occupied by expensive improvements. This stream doubtless can be completely controlled by dams, but its drainage area is only 200 square miles, as compared with 900 square miles for the Schuylkill at Reading, so its control would only partially solve the problem. The control of this one stream by a dam and retarding basin probably would cost more than complete flood control for the city by other methods. The Tulpehocken Creek would, however, furnish valuable water supply storage, if it should be needed for industries in or below Reading. An examination of the map suggests a straightening of the river by cutting off two bends just below Reading. Such a straightening would eliminate the need for four large railroad bridges, but would require two very deep cuts, one of more than 100 feet. They would cost more than protection by other means, and would only partially solve the problem.

FLOOD CONTROL METHODS.

"Methods of flood control, which appear to be feasible from an engineering viewpoint, are:

"First — The enlargement of the river channel by excavation.

"Second — The construction of a concrete wall along the east bank of the river.

"Third — The construction of a levee along the east bank.

"Fourth — A combination of the three methods mentioned above.

"The enlargment of the river by excavating the channel would require the removal of perhaps 1,000,000 cubic yards of material in order to secure full protection. The most feasible method for doing this work probably would be excavation by means of dragline machines of the revolving type, loading the material on cars and transporting it to some place where it could be dumped. The cost would depend largely upon the difficulty of finding suitable places for wasting the excavated material, upon the character of the soil or rock excavated and upon interference with existing improvements. These and general construction costs are so difficult to determine in this case that the cost per yard cannot be estimated without careful investigation. It probably would be between 60 cents and a dollar per cubic yard. Among objections to this plan would be the possible high cost of maintaining the excavated channel due to silting or caving of banks, the possibility of undermining bridge foundations and possible interference with existing dams. One important advantage of protection by channel excavation is the fact that local drainage would not be interrupted, and that a partial improvement might be carried out without danger of failure such as would follow the overtopping of levees.

LEVEE SUGGESTED.

"A levee along the east bank of the river is not feasible unless the bed of the Schuylkill Canal can be occupied because the canal and railroad tracks are too close to the river to allow levee construction between them. If the canal could be entirely abandoned, complete protection could be afforded the city by this means at a cost of perhaps half a million dollars, except that back water at the lower end might not be entirely prevented. If the canal cannot be entirely abandoned, it might be carried through the city in the bed of the river by the construction of two low dams fitted with locks, thus releasing the present canal for a levee location.

"The narrow strip of land between the canal and the river, while not wide enough for a levee, probably would be a suitable location for a concrete wall. The uncertainty in the cost of such a wall, aside from present fluctuations of construction costs in general, is because the character of the foundation is unknown, as are also the complications which would be encountered in occupying part of the canal right of way. Such a concrete wall would require a flood gate where the canal leaves the river in the upper part of the city, and probably another at the lower end of the city where the canal enters the river. The cost of flood protection by means of such a wall might be three quarters of a million dollars, but dependable estimates would require very careful investigation.

DREDGING NEEDED TOO.

"Along part of the east bank o the river through the city there i room to construct a levee withou interfering with canal or railroad The improvement might consist o an earth levee where there is roon and of a concrete wall where th canal is very close to the river ban Probably a limited amount of chan nel improvement by dredging wou enable such a combined improve ment to be carried out with furth economies.

"The comparative economy o these different methods can be determined only by comparisons following careful examinations of foundation material for concrete walls, of the possibility of disposing of excavated earth, of the possibility of displacing or moving the canal, of the cost of right of way, and of other items. It is probable that complete protection by any method will cost not less than half a million dollars, and it is quite probable, judging from a preliminary examination, that complete protection can be secured for not to exceed a million dollars."

AGAINST DAMS AND RETARDING BASINS

Harrisburg, Aug. 27.—A series of suggestions for prevention of floods at Reading, prepared at the request of the mayor, was made public today by the state water supply commission, recommending changes in the Schuylkill River and other streams and along banks, which would cost from $500,000 to $1,000,000.

Control by dams and retarding basins is dismissed as impracticable by the commission, which states that some of the best sites are occupied by railroads. The Tulpehocken, which enters the Schuylkill at Reading, is well adapted for dams, but its drainage area is not extensive and it would be more valuable for water storage for industrial purposes. Straightening of the river below Reading also would be expensive.

The methods of flood control, which appear feasible, are given in the report as enlargement of the river channel by excavation, construction of a concrete wall along the east bank of the river, construction of a levee along the east bank and a combination of the three methods.

HAS HOPE FOR SCHUYLKILL CANAL

Mr. Glass Returns From Washington in Behalf of Project

Rdg News-Times 4/29/20

J. W. H. Class returned from Washington full of enthusiasm as to the possibilities of again having the Schuylkill canal in full operation.

There were hearings on several bills before the house river and harbor committe, touching on this question. One carries with it an appropriation of $18,000,000 annually for 5 years and would be used to provde better facilities on the canals in the eastern section, including the Schuylkill.

The Watson bill was also given a hearing. This carries a provision of $10,000 for a survey of the Schuylkill canal, to determine the cost of providing a channel to accomodate barges requiring 10 feet of water. This bill seems almost sure of adoption.

City solicitors of cities to be benefited will have a conference shortly and take the subject to the public service commission, which will be asked to compel the railroad to conform to charter requirements or allow the state to take possession.

How It Will Benefit.

At the meetings of the committee Mr. Glass was the main speaker. He told of the advantage and improvement the section along the canal would realize if the proposition carries. He declared it would assist materially in bringing down the high cost of living. It is not the purpose of the movement to fght the railroads, but to supplement them.

Had the canal been navigatable, he declared, there would have been fewer disastrous results from the railroad strike felt in this section. The industries would not have been nconvenienced as greatly as they were. The project, he declared, would bnefit the whole eastern part of the country.

The idea is that bulk freight at a low rate will be handled by the canal, leaving the better grade of freight to the railroads.

Would Not Oppose.

Washington, D. C., April 28.—"The Reading Company will not oppose the effort being made for the improvement of the Schuylkill river and canal," is what President Dice, of the P. & R. Company, has told Congressman Watson, of the Pottstown-Norristown district.

Congressman Watson said that the statement was made to him at the Reading's general offices in Philadelphia, where he went to find out how the Reading Company stood on the proposition, and he thought that this should be a great factor in the forwarding of the Schuylkill canal improvement association's movement for with the Reading Company not opposed to the project, there is every likelihood that the Pennsylvania will take a similar stand, and thus with the two railroad companies not objecting, one of the greatest stumbling blocks in the way of the government's attitude is thus removed.

HE SEES THE POINT

But Clear Water From Schuylkill Surprises Judge

Special to The Inquirer.

POTTSVILLE, Pa., April 15.—Judge Johnson, of Union county, who is specially presiding here was much surprised today in the Court when he was shown a sample of water from the Schuylkill River clear as crystal. The Judge, accustomed to see the river here as black as the Styx, due to the mines, inquired as to the cause of the "miracle."

G. H. Gerber, counsel for W. H. Fahl, who is suing the Philadelphia and Reading Coal and Irn Company for damages due to culm washings explained:

"This is a specimen of water taken from a colliery where proper precautions are being taken to keep coal dirt out of the river. They say they can't do it; this shows they can."

"I see the point," said the Judge.

TRI-STATE PACT TO GIVE CITY BIG WATER SUPPLY

Public Ledger — 1/26/25

Billion Gallons Daily From Delaware River Apportioned to This State, Jersey, N. Y.

240,000,000 GALLONS EXTRA THIS CITY'S ALLOTMENT

Treaty Just Signed Involves an Expenditure of $500,000,000 in 100 Years

A treaty apportioning the waters of the upper Delaware River for the use of Pennsylvania, New Jersey and New York and providing for a daily water supply of a billion gallons to each has been signed by representatives of the three States, acting as the Delaware River Treaty Commission.

The compact calls for the conserving of the flow of the stream by the erection of dams, which will also make available a vast amount of power for commercial development.

The signing of the treaty was announced in New York last night by George MacDonald, chairman of the Joint Commission. The compact must be ratified by the Legislatures of the three States.

Dr. Charles H. Miner, Secretary of Health of Pennsylvania and chairman of the Pennsylvania section of the Joint Commission, said at Harrisburg last night that the operation of the treaty would increase the supply of water available for Philadelphia 240,000,000 gallons daily without the expenditure of any additional money by the city. The city now uses approximately 350,000,000 gallons daily.

Manner of Allotment

The water which flows in the channel of the Delaware River at the point where the three States meet has been allotted equally among them and the water flowing in the river south of that point is divided equally between Pennsylvania and New Jersey.

The treaty involves the ultimate expenditure of $500,000,000 in the next 100 years.

Operation of the treaty is expected to eliminate water shortages and floods in New Jersey. The low flow of the Delaware will be increased and summer conditions will be greatly improved. Trenton will get relief from the present pollution of its water supply taken

The volume of water which the treaty would make available to each State is about equal to that which the City of New York draws from all its sources of supply.

The plan has been under discussion two years or since the Legislatures of the three States provided for the joint commission.

The Treaty Commission consists of George MacDonald, Rudolph Reimer and Jefferson Demont Thompson, for New York; Dr. Charles H. Miner, Major Robert Y. Stuart, Secretary of Forestry; Philip P. Wells, Deputy Attorney General, for Pennsylvania, and Colonel William A. Starrett and Frederick C. Schneider, for New Jersey.

Benefit for This State

"This compact," said Dr. Miner last night in Harrisburg, "is a decided benefit to our State, for it allows dams to be built across the Delaware River. This will allow commercial development of the potential energy now going to waste. It also grants the rights of a dual use of power developments on our own streams by allowing the water so developed to be taken from the Delaware River at a lower point for municipal use.

"The City of Philadelphia is using about 350,000,000 gallons of water a day. We can, under the compact, increase the quantity which can be pumped from the Delaware River 240,000,000 gallons a day without the expenditure of any additional money and without interfering with the power development. Other power projects are pending, and under the compact each will produce the same result until a total additional supply of 1,000,000,000 gallons of water a day is easily possible.

"The compact provides for the construction of dams across the Delaware River, and it may become of great importance to our giant power development."

Chairman Starrett's View

Chairman Starrett, of the New Jersey Commission, said:

"The terms of this compact solve the great need of an available water supply for the cities of New Jersey. It makes available immediately approximately 1,000,000,000 gallons of water a day and places our cities in safety for the next 100 years.

"Under the terms of the compact we can divert this water to the use of any of our needs. In our North Jersey Water District we are using virtually all of our available supply, which aggregates 250,000,000 gallons of water a day, of which Jersey City requires 60,000,000 a day and Newark requires about 50,000,000 gallons a day, and we have less than 10 per cent leeway at the present time. All of the Delaware River water can be diverted to any part of the State, and with this compact in force, all our fears of a water famine are in the dim and distant past. "The sanitary requirements of the compact require a full regulation of the entire drainage basin."

WOMEN WILL FIGHT FOR RIGHT TO SWIM

Evening Ledger 6/23/26

Manayunk Mermaids Incensed by Order Barring Them From Canal Plunge

DROP 'S' FROM 'NO SWIMMIN'

No more shall the mermaids of Manayunk make merry in the Manayunk canal at the end of their day's toil.

At least, an order has gone forth that swimming will not be permitted in the stream. The proclamation was issued by the Schuylkill Navigation and Transportation Co. of the Philadelphia and Reading Railway.

But the girls are not overawed in the least by the length of that name, and are circulating a petition urging that the company let down the bars depriving them of their nightly plunge. This petition already has several hundred signers.

Lieutenant Taylor, of the Manayunk police, says swimming in the canal is forbidden on account of an order from the transportation company. But W. B. Nissley, superintendent of the company, said the ruling was issued at the request of mill owners and property owners whose estates edge the canal at Manayunk Beach. Several mill owners have denied making such a request. And the fair bathers are in a quandary. Some of the girls declare they will swim in the canal and make a test case of the matter.

The privilege of swimming in the canal last year was obtained, it is said, through the aggressiveness of Harry H. Anderson, a former Vare councilman. An appeal will be made to William Preston, administration leader in Manayunk, by the girls. In view of the fact that women expect to vote soon in Pennsylvania they believe he will do his best in the new wet or dry controversy.

Today some one put up a sign on the canal bank announcing: "No swimmin' allowed." It was up but a few minutes when a boy painted out the letter "S."

TO NOTE OPINION ON CANAL OPENING

Association May Call for Resumption on Pain of Action Against Canal Charter

The point of whether the business public of the Schuylkill Valley from Pottsville to Philadelphia wants the old Schuylkill canal restored to service is likely to be determined in the next few weeks. At a meeting of lawyers in Reading it was decided to test sentiment among shippers of bulky freight and other business men to learn if there is really a substantial need for the waterway. The canal is the property of the Reading Railway Company, holding it through the Schuylkill Navigation Company, and it is keeping some of the old boats in repair, although there is virtually no traffic at present. The lock-tenders are nearly all kept in service, but the channel is so choked with coal culm at places that getting a loaded boat through would be almost impossible.

The Schuylkill Canal Association, if it finds a real demand for the restoration of the waterway, will call on the company to resume traffic, under the penalty of having application made to the state for the revocation of the charter. Many business interests are apathetic. Some communities are actively boosting the canal restoration movement, and the aid of both federal and state governments has been solicited in an effort to have the canal surveyed to test its desirability as part of an inland waterway system of the future.

Counsel at the meeting in Reading included: R. R. Michelson, of Philadelphia; John Haviland, of Phoenixville; Gilbert Rodman Fox and John Brumbach, of Norristown; Wellington M. Bertolet, of Reading; R. Reed, of Royersford and others. J. W. H. Glass, of Reading, chairmen of the canal association executive committee, took part in the meeting.

U. S. MAY AID CANAL BOOM

Rdg. Eagle — 11/18/19

SCHUYLKILL ON LIST IN A NEW FEDERAL BILL

CONGRESS ASKED TO GIVE 100 MILLIONS A YEAR FOR FIVE YEARS TO REOPEN COAL AND OTHER CANALS.

The Reading Chamber of Commerce and businessmen generally are interested in the inland waterways convention at Washington on Monday, Dec. 8. They may be represented there because of the prospect of the old Schuylkill Canal being reconstructed as a coal and other freight carrying medium, with government backing for the project. This plan has been included in a bill to provide a large federal appropriation for the rennovation of canals and important streets that could be used for carrying freight if deepened and kept clean.

The meeting in Washington on Dec. 8 will be preceded by a session at the Washington Hotel of the Mississippi to Atlantic internal waterways committee, called by Chairman W. H. Stevenson and Secretary Burd S. Patterson. The purpose of the convention is to consider the House of Representatives' bill providing an appropriation of $100,000,000 a year for five years to construct, acquire and improve a nation-wide system of waterways within that period. The work suggested must have the approval of United States engineers.

Includes Schuylkill Canal.

State Auditor General Charles A. Snyder, of Schuylkill county, will be one of the leading speakers at the convention from Pennsylvania.

The bill to be considered was introduced in the lower House of Congress on June 28 last by Congressman G. E. Campbell, of Pittsburgh. Among its provisions is an appropriation of $13,000,000 for Atlantic intercoastal canals, under which would likely come the reconstruction and reopening of the Schuylkill canal, if that project is given serious consideration after the bill becomes a law.

The main purpose of the convention is to unite all waterways organizations of the country in support of the Campbell bill. Senator Joseph E. Ransdell is one of the speakers, and there will also be addresses by the presidents of the various waterways organizations. There are many businessmen in the Schuylkill Valley who are strongly of the opinion that the reopening of the Schuylkill canal would prove a profitable venture and afford a means of transportation for reaching communities which are not now touched by railroad lines. The coming convention will afford such an opportunity to push their project, and if there is teamwork among all cities and boroughs in the Schuylkill Valley something tangible in the way of reopening the canal may be the outcome.

Port Clinton the Terminus.

Burd Patterson, Pittsburgh lawyer, historian and newspaper writer, was in Pottsville for the past several days consulting with citizens, and it is believed by some that the reopening of the canal now is only a matter of a short time.

The coal companies have flooded the canal with culm so systematically for a number of years past that now the few boats which are loaded come no nearer to this region than Port Clinton, which is 15 miles below the coal belt. It is entirely practical to reopen the canal again to the coal region and make transportation cheap and efficient.

The plans for the reopening of the Schuylkill Canal, along with other inland waterways, has the indorsement of the state Chamber of Commerce, of Mayor-elect J. Hampton Moore, of Philadelphia; Gov. Sproul, Auditor General Snyder, Frank C. Reese, of the Anthracite Consumers' League, and other prominent citizens.

It is believed the results in the Schuylkill Valley of the opening of the Schuylkill Canal to public traffic again would be as gratifying as in the Pittsburgh district, where the government spent seven million dollars on the Lake Erie and Pittsburgh canal systems. The result was that during the war, when transportation facilities were blocked, and the railroads unable to handle the public business, the canals carried 25,000,000 tons of coal at a saving of $10,000,000, as compared with rail rates, and 6,000,000 tons of other material at a saving of $4,000,000, or a total of $14,000,000, which was twice the amount spent by the government in the enterprise. This coal kept Pittsburgh's great industries going during the war and helped them to turn out their share of the 60 per cent. of the nation's war munitions furnished by Pennsylvania.

Could Supply Large Cities.

The scarcity of coal during the winter months in Philadelphia and New York, due to the inability of the railroads to carry sufficient fuel, would undoubtedly be obviated if the Schuylkill Canal is reopened and rejuvenated.

Frank C. Reese, of the Anthracite Consumers' League, says the opening of the canal furnishes the best practical scheme for the lowering of the price of anthracite in Philadelphia without affecting the wages of miners.

IN TIME OF WAR OR PEACE.

"Whereas by reason of transportation through the proposed improved Schuylkill Canal the congestion on the Pennsylvania and the Reading Railways would be relieved, and

"Whereas, The late war has taught us the necessity of increased and varied modes of transportation, and

"Whereas, The proposed improved Schuylkill Canal, by reason of its locality and inland position affords safety to its cargoes and immunity from attack by enemy vessels should they by perchance enter our waters, and

"Whereas, The transportation of said cargoes could be handled proportionately with considerable less manpower and expense than transportation by rail or any other means of transportation, thereby affording considerable saving of monies and permitting the use of manpower thus saved toward other importatant and essential purposes, and

"Whereas, in peace times, by reason of low cost of transportation through the said Schuylkill Canal, a reduction could be afforded on the price of fuel and other essentials,

"Therefore, be it resolved that the Schuylkill Canal Improvement Association do hereby indorse the proposed improvement of the Schuylkill Canal and beseech your honorable body to recommend favorably the passage of H. R. No. 6852, now or about to be presented, and thus serve the interests of our government, the United States of America."

THE READING CO. WON'T OPPOSE OPENING SCHUYLKILL CANAL

Pottsville Republican 4/27/20.

[Special Staff Correspondent]

WASHINGTON, D. C., April 28th—"The Reading Company will not oppose the effort being made for the improvement of the Schuylkill River and Canal," is what President Dice, of the P. & R. Company, has told Congressman Watson, of the Pottstown-Norristown district.

Congressman Watson said that the statement was made to him at the Reading's general offices in Phila., where he went to find out how the Reading Company stood on the proposition, and he thought that this should be a great factor in the forwarding of the Schuylkill Canal Improvement association's movement, for with the Reading Company not opposed to the project, there is every likelihood that the Pennsylvania will take a similar stand, and thus with the two railroad companies not objecting, one of the greatest stumbling blocks in the way of the Government's attitude is thus removed.

In the hearing before the Rivers and Harbors Committee of Congress based on the bill presented by Congressman Watson of the Pottstown and Norristown districts there was much valuable information obtained from the work of George M. Lehman, Engineer of the Dept. of Internal Affairs of the State of Pennsylvania.

Mr. Lehman's map showing the entire Schuylkill Canal location from the suburbs of Philadelphia to the suburbs of Pottsville, depicting how the coal was put on the boats, in the early days, at Port Carbon, Mount Carbon and Schuylkill Haven and Port Clinton, and also showing the entire lock system, until the transportation of the coal reached the Delaware River at Phila., from whence extensions of the Canal transportation were made to New York and other adjacent waterway terminals, was very interesting and was largely the basis of the consideration of the bill as to whether the Government would or would not order a new survey to be made, or accept the old one, or decide whether or not Schuylkill Canal projects should be considered at the same time as the general Inland Waterways systems application for appropriation and ultimate Government supervision and rehabilitation.

James H. Craig, Deputy Secretary of Internal Affairs of Penna., said that the keystone state, at the direction of Governor Sproul, and his cabinet, was instituting the more general utilization of its waterways, from the tiniest rivulet to the great river and lake facility, and that the state would hereafter insist on protecting its water rights for the benefit of all of the people instead of permitting them to be obliterated as competition, and from being absorbed as valuable rights, at the hands of individuals and corporations.

Said Mr. Craig: "The State of Pennsylvania is going to take back the possession of its water rights that have been so largely and so illegally seized by individuals and corporations, and while there is only a mere shell left of the once great valuable water privileges and property yet the state was going to make everything possible out of what was left and was going to demand the return and reparation of its water facilities from those who now illegally held possesion.

Continued Mr. Craig: "Particularly is the State of Pennsylvania going to assert its ownership to the property that properly belongs to it at the terminals and along the shores, and of the islands, and of the land that under the state's direction can be utilized in the future for the necessary terminal facilities for boats and rail transportation, that is not now utilized as it should and must be."

The startling declaration was made by Mr. Craig, "The time is coming when the present waterways, if not utilized for boating facilities, would at least be transformed in some shape or other to the terminal resources so much needed by the country, even to the building of second and third terminal facilities over the area allowed for boating, at some of the most congested points where at present there is no land terminal facilities available.

Mr. Craig declared that the state did not want anything else to be done to the Schuylkill River and Canal any more than necessary to the waterways in other sections where business was congested; he declared his belief that the time would come when at Pottsville, Reading and Phoenixville and all the way from Norristown to Manayunk and Conshohocken and Phila. that much if not all of the Schuylkill Canal and the Schuylkill River area must not only be needed for water transportation, but also would be largely utilized overhead by elevated transportation system, and as an illustration he said that from one to five per cent. of the rivers' and canals' overhead area was already utilized in the vicinity of the larger cities by elevated structures for transportation and manufacturing purposes, and that the future would see this largely added to.

The utilization of the waterways like the Schuylkill River and Canal, is now realized as a positive necessity to take care of the growing business of the nation, and that no one realized this more than did the present day railroad management, and that each succeeding year would see a lessening of railroad opposition to the utilization of the water transportation facilities of the nation.

The application for a survey of the Schuylkill River and Canal, under U. S. Government direction, was urged and endorsed by President Stevenson and Burd S. Patterson, of the Inland and Pittsburgh Canal system; by J. W. H. Glass, the Reading-Royersford Manufacturer; by Councilman Barkley, of Phoenixville; by City Councilman John B. Dengler, by J. H. Zerbey, Jr., of Pottsville, and others

Chairman Dempsey, of the Rivers and Harbors Committee, stated that the committee would view Schuylkill's claim with favor, and that the probability of survey authorization was excellent.

Should or should not Congress decide to include the Schuylkill Canal among the waterrways that are to be immediately improved, or should Congress decline to take up the Schuylkill Canal question at this time, is not going to end the matter, for the co-operation of the State of Pennsylvania is to be sought and urged to the limit. J. H. Z., Jr.

There From Many States.

WASHINGTON, D. C., April 27, 1920.

TELLS OF VALUE OF THE CANAL

COULD CONVEY 3,600,000 TONS OF FREIGHT

Rdg Eagle — Apr 28 1920

J. W. H. Glass, first vice president and chairman of the executive board of the Schuylkill Canal Improvement Association, appeared before the committee on rivers and harbors of Congress in the interest of the Watson bill, to authorize the secretary of war to cause a survey to be made of the Schuylkill canal and appropriating $10,000 to pay the expenses.

Mr. Glass was the principal speaker in behalf of the bill. He pointed out the importance of the canal in case of war emergency for the transportation of coal in barges from the mines to tidewater. He said that it would prevent a congestion of traffic, since transportation is of vital importance to the country. Mr. Glass told the congressmen it was not the intention to fight the railroads, but supplement them by using the canal for coal, iron ore and other bulky freight, and thereby leaving the railroads for the conveying of perishable goods, clothing and other freight that requires quick service. He also contended that the canal as it is now, is a menace to health and the proposed improvements included the purification of the water that is now used to a great extent for domestic purposes at Philadelphia and other points.

What It Could Do.

Mr. Glass made a statement concerning the tonnage of the canal as it would be if made navigable for traffic. With a single lock system, he said, 3,600,000 tons of freight could be transported during the canal season, and with double locks, twice that amount.

Presiding Chairman Dempsey and other members of the committee asked Mr. Glass a number of questions, all of which he answered to their satisfaction. He said they appeared to regard the project favorably and he believed they would report out the bill with an affirmative recommendation.

The Schuylkill canal is included in the Campbell bill, which provides an appropriation of $18,000,000 annually for five years for the acquisition, improvement and construction of Atlantic intracoastal canals.

Mr. Glass was accompanied to Washington by officers of the association from Pottsville, Phoenixville and other places in the Schuylkill Valley. Officials of the Department of Internal Affairs of the state were present. Mr. Glass thinks the prospects for the improvements to the canal, now that the rivers' and harbors' committee has been made familiar with them, are excellent.

COUNCIL TO ACT ON CANAL ASSOC'N PLAN

Norristown — 1/19/20

Likely to Select Representation at To-Morrow Night's Meeting

Among the matters to come before the Norristown Town Council, tomorrow evening, at the adjourned meeting to be held at 7.30, aside from the naming of the committees ement of the Ninth ward n will be that of the representation at the he Schuylkill Canal Improvement Association to be held at the Hotel Berkshire, Reading, on Wednesday.

A formal invitation has been extended to the municipality to take a part in the movement under way looking towards the re-establishment of traffic on the Schuylkill Canal through securing an appropriation from the government for the reconstruction work that will be necessary to make the old waterway again navigable from the headwaters.

Municipal officers of the borough are much interested in the matter, by reason of the advantage that there will accrue to the business and industrial interests of the community through the resumption of activities on the canal.

It is likely that the Manufacturers Association will also send representatives to the gathering.

Conshohocken business interests as well as the municipality will be represented by Richard H. Bate, Sr. the veteran financier of that borough.

SCHUYLKILL CANAL PLAN IS INDORSED

North American — 1/19/20

Gov. Sproul, Senator Knox and 7 Congressmen Back Project

CALL CONVENTION

READING, Pa., Jan. 18.—J. W. H. Glass, this city, vice president of the Schuylkill Canal Improvement Association, made up of various towns and cities along the water way, has received letters indorsing the project from Governor Sproul, Senator Knox and from seven congressmen.

The association will hold a convention in this city on Wednesday, January 21, to consider ways and means of interesting the federal government in converting the old canal, now virtually abandoned, into an anthracite coal carrier from Pottsville to Philadelphia, nearly ninety miles, and to restore it to usefulness for general bulk freight traffic. J. H. Zerby, of Pottsville, is president of the association, which organized at Washington, D. C., last month, with Mayor John K. Stauffer, of Reading, as one of its boosters.

James H. Craig, deputy secretary of internal affairs, and George M. Lehman, a state engineer acquainted with waterway systems, will attend the convention. The seven congressmen sending letters promising aid of a federal bill to restore the canal, or otherwise supporting the move, are Arthur G. Dewalt, Henry W. Watson, Thomas F. Butler, George P. Darrow, M. M. Garland, G. W. Edmonds and Guy E. Campbell, who has a canal bill now before congress.

TRENTON WAITS BIG DAM CONSTRUCTION

Gould's Rift Could Light Delaware Valley From Water Gap to Capes

Inquirer 12/21/19

Secret Surveys Made; Conjecture Made P. R. R. May Be Behind Great Project

Special to The Inquirer.

TRENTON, N. J., Dec. 20.—Lighting the Delaware Valley from the highlands of the Water Gap to the capes and supplying the electric power to run hundreds of industrial plants located in the adjacent areas, are the possibilities, it is said, latent in the plan to construct at Gould's Rift in the river above Trenton what, when completed, will prove one of the most powerful hydro-electric plants in the country. To accomplish this means nothing less than the harnessing of the Delaware River by construction of a power dam insuring a water head of at least fifteen feet. While in inner circles here it is understood that a plan of this kind is on foot, that the project is "in the air," as Mayor Frederick W. Donnelly expresses it, no specific information as to the big interests back of it has been made public.

In some circles it has been thought the promotion was in the hands of either Stone and Webster, of Boston, who put through the power dam on the Mississippi, or a similar organization. Others believe that the development is probably being undertaken by interests which will be benefited through the operation of such dam. Among them it is thought may be included the Pennsylvania Railroad, which it is known has planned to electrify its service between Philadelphia and New York and which would in this way obtain at a minimum cost the electric power required to carry out this plan.

"I admit that it is only a guess," said M. D. Warren, traffic manager of the Chamber of Commerce, "but I can conceive of the Pennsylvania Railroad being interested in such a development. It is understood that the line is to be electrified between here and New York. The Delaware River at Trenton would be the logical point to establish a great power plant for such purpose. As is generally admitted the possibility to construct a hydro-electric plant above here by damming the river offers a solution when it comes to seeking a cheap electric power service, so why not include the railroad among those who may be interesting themselves in the development so long as we cannot say definitely what interests are really back of the project?

"What has caused me to wonder as much as anything else is that such a development was not realized long ago."

Mysterious Doing Carried On

Interest has suddenly been revived in the work carried out by a corps of engineers who spent several weeks in Trenton and vicinity during the summer without disclosing definite information as to what they were doing. It is now believed that they were engaged on a "gumshoe" investigation in connection with the proposed power dam. It is also known that a quick survey was made recently of the river just above here. At the time it was believed it had something to do with the plans which have been more or less in contemplation in connection with the opening up of the upper Delaware River to navigation. This is now considered as having a significant bearing on the power dam project.

One thing is generally conceded, the site for such a dam exists in the vicinity of Gould's Rift and the unusual and unexplained interest taken in the river in that vicinity seems inexplicable, except as indicating that an improvement of the character described is contemplated by an organization strong enough to put it through.

What lends color to this solution is the possibility of constructing a fifteen-foot power dam at this point which would limit the district affected by the back-flow of water to a little over three miles above the city, approximately as far as Washington's Crossing. Consequently there would be little levy work required and a comparatively small property damage. These are two of the big factors, it is said, that have to be considered in planning all hydro-electric plants. Incidentally, Gould's Rift is just above the tidal limit.

"There is no discounting the fact that more than 20,000-horse power is going to waste in the river here," said Mayor Donnelly today. "There have been a number of plans at different times to construct a water power at Trenton. A small step in that direction has already been undertaken. Nothing, however, so far as I know, has approached in magnitude the plans for the proposed development. The value of such a power plant in connection with the deepening of the channel in the Delaware to Trenton should not be lost sight of. It would also prove a long first step toward opening up navigation in the upper river. It has many bearings, all of which would seem to benefit that region as much as any other."

Mayor Donnelly stated that he had not been consulted by any one connected with the project, but that it had been heard of. As he expressed it, "It is in the air."

That construction of such a dam would prove an opening wedge to navigation in the upper Delaware, possibly as far as Easton, Pa., was the opinion of Abram Swan, Jr., city engineer.

"Allowing for the possibility of connecting up certain levels above the proposed dam site, it would be possible, I should say, through the construction of possibly eighteen small dams and locks in the upper river to open it up to navigation all the way to Easton," he said. "It would seem that a partial answer has been found to the cost of developing that section of the river which has heretofore been considered prohibitive in comparison with the value of the traffic it would handle."

Efforts to secure an approximate idea of the cost of an hydro-electric plant at Gould's Rift proved futile here today. While it was conceded by those in a position to make such an estimate that it would involve the expenditure of hundreds of thousands of dollars, it was contended that after the plant was once in operation it would quickly earn back the cost of construction, while thereafter only overhead expense would have to be considered and this, it was said, would be comparatively low as compared with steam plants of the same magnitude.

One interesting possibility was suggested in the dam's connection with the Delaware-Raritan Canal. It was said that power could be supplied which would result in the canal being electrified, thus making it possible to bring vessels through at a considerably greater speed than if permitted to travel under their own power. It was explained that this could be effected by the use of electric shoes attached to the vessels which could be made to follow a rail as do trolley cars on third rail systems.

In connection with the deepening of the Delaware River channel to this point, it is now being urged that a channel of not less than twenty-five feet is necessary. It is proposed to construct a basin approximately 300 feet wide and 1000 feet long with a depth of more than 25 feet in connection with such a channel. The purpose of the basin will be to insure floatage for vessels reaching Trenton with the tide and laying over to discharge or load cargoes. The plan is the same in principle as that carried out at London in connection with the navigation of the Thames River. In

STATE WILL BUILD BRIDGES

Phila. Record 7/5/19

Highway Department to Do the Work Where No Bids Are Received.

Harrisburg, July 4.—"Due to the exceedingly motor truck and other vehicular traffic, the bridge problem assumes big proportions," declares Highway Commissioner O'Neil in a statement issued here tonight in which he calls attention to the fact that all bridges originally built by townships and on State main highways now must be cared for by the State. Some of them are old structures. "As rapidly as possible the department is replacing these old bridges with modern ones," says the statement. "The department forces will build needed bridges for which no bids were received or rejected as too high."

INDICTS COAL COMPANY FOR POLLUTION OF STREAM

Special Dispatch to The North American

POTTSVILLE, Pa., Nov. 15.—The Schuylkill county grand jury has indicted the Lehigh Coal and Navigation Company under a new law for maliciously discharging culm into public streams, and attorneys for the company today began to fight the prosecution on technical grounds, a motion being made to quash the indictment.

Jacob Zehner, a farmer from West Penn township, is the prosecutor. He says his grist mill and other properties have been greatly damaged by culm. Ten years ago Zehner got a verdict for heavy damages from the Lehigh Coal and Navigation Company, but as this has not stopped the practice, he says he will try to put the officials responsible in jail.

BOATING RESUMED MONDAY

Canal Will Not Be Abandoned as Had Been Rumored

Fears entertained and rumors that had gained circulation to the effect that the Schuylkill canal would be abandoned as a waterway were dispelled when it was announced by the Schuylkill Navigation Co. that navigation on the canal for the season was begun on Monday, July 10.

Such reports, which were rapidly gaining circulation and arousing much concern in the regions through which the canal passes, are supposed to have had their origin in the fact that not a boat had moved thus far this season. The cause of the lateness of the opening of navigation was explained by W. B. Nissley, superintendent, as due to the making of necessary repairs and improvements to the canal and the erection of a new shipping wharf above Hamburg. This is now practically completed and shipping of coal will be pushed the remainder of the season.

Rdg. News Times 1/21/20

SCHUYLKILL CANAL

The Schuylkill Canal Improvement Association, which holds a meeting in Reading today, proposes to resurrect that one-time famous inland waterway and restore it to something of its former usefulness. It is a big undertaking and beset by many difficulties, but headed by that energetic editor from Schuylkill county, J. H. Zerby, the organization may succeed in accomplishing something. Another man, J. W. H. Glass, of this city, has entered the project whole-heartedly, and has succeeded in enlisting the services of others who at first were inclined to look upon it as a hopeless undertaking. Last November Mr. Glass was a candidate for city council, and although comparative a new man here, he polled a fine vote and impressed many as being public-spirited and progressive. His efforts in behalf of restoring the Schuylkill canal have been marked by intelligence and persistency.

And this project, by the way, is one that ought to enlist the sympathetic co-operation of all persons having either a direct or indirect interest in the city's industrial and commercial welfare. The Chamber of Commerce especially, whose primary object is the advancement of Reading should lend its valuable assistance and aid in bringing about Federal recognition of the importance of the work. The canal has already, through the efforts of the body which meets here today, been included in the list of waterways which the inland commission will recommend to Congress as one worthy of Federal aid. A determined effort backed by the various towns from Pottsville to Philadelphia will show to Congress that we are in earnest, and it will go far toward inducing favorable action.

The Schuylkill canal was in its time the main artery of transportation between the coal regions and Philadelphia and it continued an important factor in keeping down freight rates until in an evil day it fell into the hands of the railroad company. Since then it has been permitted to deteriorate, and as a factor in transporting coal and freight it is today a neglible quanty. The war, however, demonstrated the utility and importance of inland waterways, and the national lawmakers awoke to the necessity of restoring and enlarging some of the more important ones.

With the restoration of the Schuylkill canal will come increased facilities for moving coal and freight and incidentally a reduction in rates, a feature which must appeal to every one doing business in the cities of the Schuylkill Valley. The chief difficulty may be to secure the canal's divorce from the railroad company, which has a 999-year lease. But that is an obstacle not insurmountable where its removal is demanded by public opinion and a willing Congress.

THE SCHUYLKILL CANAL MEETING

Rdg. Telegram 1/21/20

Association Which Seeks Its Restoration Discusses Project at Berkshire Meeting

A one-day conference of the Schuylkill Canal Improvement Association opened this morning at 10.30 o'clock at the Hotel Berkshire. Rev. William B. Smith offered the invocation.

Mayor Stauffer welcomed the delegates to the city, and endorsed the project. The mayor said: "It is significant of the interest felt by all towns along the Schuylkill Valley as well as by the state government that there should be such prominent men from each community represented in attendance at the convention."

The morning session was devoted to routine business. J. H. Zerbey president, addressed the delegates who represented cities in the Schuylkill Valley from Norristown to Pottsville.

At the session a resolution was introduced by President Zerbey, calling upon Congress to make an official survey of the Schuylkill canal and endorsing the provision of the Campbell bill, calling for a state appropriation for various canal developments in the state.

A delegation was also chosen to be present at a convention of the association to be held in Washington, February 21.

At 6 o'clock tonight a banquet will be held at the Berkshire. Mayor Stauffer will be the toastmaster.

DECHANT'S PLAN TO UTILIZE CULM EXCITES COAL MEN

Rdg Times 4/4/27

National Body Asks Further Information on Matter from Chamber of Commerce

SEEKS RIVER CLEANSING

Silt, if Continued Disposal Is Allowed, Will Soon Destroy Schuylkill

Intrigued by the possibility of turning waste matter into money, the National Coal Men's association has requested the Reading Chamber of Commerce to explain more fully the plan outlined by Fred H. Dechant, local engineer, at the recent conference held here between the river pollution committee of the Chamber of Commerce and government engineers.

Dechant's plan showed how the culm now being emptied into the Schuylkill river could be burned, turned into power and made a source of revenue to the coal operators.

The rive pollution committee will refer the matter to the engineer in an effort to enlist further co-opertion in its work to clean the rives. For more than four years the committee has been studying the problem of river pollution with the view of having the river cleansed.

Destroys Crop Lands

Investigation has showed that coal dirt causes most of the trouble as this deposits silt on the bottom the river, causing it to fill up, destroying the navigable nature of the stream and ruining and destroying farm land. Wherever, after a flood, this silt deposit is forced over the banks of the river. Once the farm land is covered with these deposits it is useless as a crop producer. Evidences of this are said to exist along the entire river front.

The local committee in its effor to stop thte pollution had several interviews with former Governor Pinchot and has consulted a number of engineers.

H. W. Elvidge, secretary of the Chamber of Commerce, said last night, "If either the United States government or the state government would determine to study carefully and analyze the causes of the pollution of the Schuylkill river, I believe that they quickly would find some way by which the by-products now going from coal mines into the river could be utilized in an industrial way. There was a time when fine coal was not in demand, but at this period the use of powdered coal has developed to a stage where public utilities are using it and it is quuite possible that a valuable by-product of mining is going to waste and finding its way down through the Schuylkill river with all the results and damage."

Will Destroy Whole River

Members of the committee predict that at the present rate of pollution it will be a matter of only 10 or 12 years before the river will have been destroyed to the city limits of Philadelphia. At the present time it is unfit from navigation down as far as Pottstown.

In addition to conferences with government engineers and the Governor, the committee also met in the parlor with Mayor Moore of Philadelphia and John C. Sproule, director of wharves, docks and ferries of Philadelphia. Both these officials agreed that "the stream should kept open and unobstructed."

ORGANIZE TO REVIVE CANAL TO TIDEWATER

Rdg. Eagle 12/8/19

READING AND POTTSVILLE MEN AT WASHINGTON BOOST PROJECT

Washington, Dec. 8 (Special).—At a meeting here today of delegates from communities along the Schuylkill River attending the inland waterways convention, a permanent organization, to be known as the Schuylkill Canal Improvement Association, was formed and a resolution adopted and presented to the rivers and harbors committee of the House of Representatives, urging the opening of the Schuylkill canal from Pottsville to tidewater for the hauling of freight, particularly of coal. Officers of the new association elected were J. H. Zerbey, Pottsville, president; J. W. H. Glass, Reading, first vice president; E. A. Berkley, Phoenixville, second vice president; and W. L. Binder, Pottstown, secretary-treasurer.

Mayor-elect Stauffer, of Reading, attended the meeting. It was decided that when the delegates return to Pennsylvania, organization of the associations shall be continued in all the communities interested. The resolution presented to the House committee reads as follows:

"To the committee on rivers and harbors, House Office Building, Washington, gentlemen:

"Whereas, Recognizing the importance of opening up the Schuylkill canal from Pottsville to tidewater for the hauling of freight and particularly coal, affording a direct route of transportation from the mines to the barges of our outgoing vessels, thereby eliminating the rehandling necessitated by transportation by rail; and

BLASTING OF ROCKS MAY STOP FLOODS

Phila Inquirer 1/9/20

Engineers Would Open Schuylkill Channel to Save Damage in Manayunk

Halting of Rising Water Would Prevent Enforced Closing of Mills

Plans for blasting away the rocks in the Schuylkill River at and above "the Falls" are being prepared for submission to the Fairmount Park Commission as a means of stopping floods that cause thousands of dollars' worth of property damage yearly and enforce idleness of many employees in Manayunk mills. High water frequently forces a score or more of mills to shut down.

Studies made by engineers for the Park Commission reveal that the great rocks over which the waters of the Schuylkill cascaded a century ago and which were known as the "Falls of Schuylkill," form a gorge which holds back the flow of water during freshets and causes it to back up and flood the basements and first floors of the mills at Manayunk.

It is believed that the clearing of the rocks and a great amount of dredging work will virtually eliminate the flood menace.

The problem of clearing the river of obstructions and making it not only a pleasure point, but a place of real value to the city has been worked out as a result of action taken by Mayor Moore some time ago to obtain data on the cost of a municipal dredging plant for the Schuylkill.

It is understood his proposal is looked upon favorably. A new plant would cost between $80,000 and $100,000, it is said.

A great quantity of mud has been cleared from in front of Boat House Row by a private dredge at city expense, and Park officials estimate that 50,000 cubic yards were taken out of the river with the $25,000 appropriation made a year ago. Along with the recommendations to be made for a city dredging plant is expected the proposal that plans be adopted to make the river eight feet deep from Fairmount Dam to above the mouth of the Wissahickon Creek.

This would mean the dredging of two side channels, where the flow of water would provide a "scour" and eat away the mud in the centre of the stream; the blasting away of great masses of rocks between the Falls bridge and the mouth of the Wissahickon and the automatic formation of a storage basin as part of the future water supply plans being worked out by the administration. Water would be retained in this basin as in a reservoir during dry weather as a reserve supply for the Belmont filters.

$5,259,915 IN WORK TO IMPROVE WATER

That Sum Expended or Under Contract Since Moore Assumed Office

Plans Call for Every Measure of Safety and Economy

Inquirer 12-11-21

A report showing that $5,259,915 worth of work has been contracted for to improve the city's water supply since he assumed office was made by Mayor Moore yesterday when he signed contracts for $449,900 worth of new construction work.

The plumbing and filtering capacity of the water works have been greatly increased, new service mains to raise the water pressure and improve the supply have been laid and general improvements have been and are being worked out which will result in substantial economies in the cost of operation.

Council has provided $6,605,000 in loan funds for the improvement of the water supply since the Mayor assumed office and approximately $1,350,000 of this amount is left unencumbered for the completion of the projects now under way under the direction of Carleton E. Davis, Chief of the Water Bureau.

Extensions Cost $150,000,000

A special commission of eminent engineers went over the city's water system more than a year ago and recommended extensions which eventually will cost from $100,000,000 to $150,000,000, and which include an intake far up the Delaware River and dams to impound the waters of the Neshaminy and Perkiomen Creeks.

The plan submitted by Chief Davis and approved by the administration dovetails in with this scheme, but contemplates first the improvement of the existing plant until it is 100 per cent. efficient.

Provision is being made first for safeguarding, strengthening and where necessary extending the existing works with the view of relieving as soon as practicable the acute water shortage which prevails in many districts. Action also is being taken to minimize the danger from accidents arising from the worn out and run down condition of much of the equipment.

In following out these first aid measures every effort has been made to tie the work in with the plans for the future so it would not be necessary to throw away any important sections of the plant or equipment.

In the plans of immediate rehabilitation all parts of the system have received attention and all portions of the city have been cared for.

Service of the Mains

About $82,000 has been expended or put under contract for service mains and about $500,000 expended for supply mains. In distinction from service mains, these supply mains are pipes 30, 36 or 48 inches in diameter acting as feeder mains in large territories. A 48-inch main has been laid in West Philadelphia southerly from Cedar avenue along the line of Fifty-seventh street to Woodland avenue. The water pressure in this territory has been increased from 20 pounds or less to 40, 50 or even 60 pounds. This increase is a boom to manufacturing establishments, to residents and adds greatly to fire protection facilities.

A 20-inch main is now being laid on Sansom street from Ninth to Twenty-first streets, for the purpose of stabilizing the water pressure in the territory from Chestnut street to Walnut.

The Queen Lane improvement project is the largest undertaking in the general improvement of the water works, carrying with it expenditures and liabilities to date of $1,850,000. This will add 50,000,000 gallons a day to the output of the plant and the majority of this volume of water will be available in the central and southern business sections where the shortage has been most acute. Already some of this additional water is being supplied.

At Torresdale, where 60 per cent. of the city's supply is taken from the Delaware River, about $450,000 has been placed under contract, all with a view of strengthening, safeguarding and protecting the existing appliances. Two years ago this plant was on the verge of complete breakdown and serious accidents followed one another in rapid succession.

At Lardner's Point pumping station, where filtered water from Torresdale is received and relayed under pressure to important parts of the city, about $250,000 has been placed under contract, with the same object as that pursued at Torresdale.

Contracts for $300,000

At Shawmont and Roxborough, furnishing the supply for Roxborough, Manayunk, Germantown and Chestnut Hill, expenditures and contracts approximating $300,000, have been made to add to the pumping capacity and result, in the near future, in an increased pressure and volume in the southeastern portion of Germantown or easterly from Chelten avenue. Still further appropriations must be made for the Shawmont and Roxborough works as the demand for water will soon outstrip the capacity of the plants.

Economy of operation has been given careful attention. It is proposed to operate George's Hill Pumping Station and Belmont filters, in West Philadelphia, by electric current developed at Belmont Pumping Station along the West River drive, and to consolidate the two plants at the Belmont filters. Conservative figures show that this consolidation will result in a net saving of approximately $30,000 a year after allowing for carrying charges.

Saving $40,000 a Year

By the removal of the Wentz Farm standpipe station to Lardner's Point, a net saving of $40,000 a year is estimated.

The repair shop, now being erected and equipped at Twenty-ninth and Cambria streets, will result in economies and will at the same time place at the disposal of the Water Bureau a better equipped up-to-date modern plant.

The balance of appropriations still on hand is adequate to complete the projects now under way. There is not sufficient money, however, to finance such important improvements as the new Fairmount Dam, a general water supply in the northeastern section of the city above Frankford, or the extension at Shawmont and Roxborough plants. Included in this latter project must be sufficient money to replace the so-called Hartwell avenue line, leading from the Roxborough standpipe to Chestnut Hill. On Wednesday last this pipe broke for the ninety-third time since its installation with interruption of water supply of Chestnut Hill.

SATISFY 100-YEAR OLD MORTGAGES

Money Loaned by Stephen Girard to Schuylkill Navigation Company

Century-old debts — recorded by Father Berks in his first court house on Penn street, preserved later in the North Sixth street building and now in the temporary quarters—were wiped out yesterday when seven mortgages against the old Schuylkill Navigation company were paid. The mortgages were for loans aggregating $2,419,764.12.

To the heirs of Stephen Girard, founder of Girard college in Philadelphia, was paid $230,850 to erase the oldest debt, contracted on December 15, 1823. Girard, according to the records in the office of Recorder of Deeds Harry O. Thornburg, loaned the money to the company "to complete works contemplated." The rate of interest was not specified by the recorder of 1823, John Miller.

Latest Loan in 1870

The other mortgages, dated 1824, 1842 and 1870, were for loans which ranged from $141,000 to $1,200,000. The papers, in which it was said the heirs of the original lenders were paid through Philadelphia and New York banks, were filed in Thornburg's office by Albert W. Tuttle, representing the Reading company.

The Girard mortgage is one of the oldest satisfied in the county since Thornburg took office, the recorder said.

How 2 Men Won Coal Rates Fight

North American 3-19-17.

COMPROMISE of the coal freight rate controversy in this state, which resulted in material reductions in freight-carrying charges from the mines to this city, was the first real rate fight won in this country that resulted in making the railroads give up actual revenue.

DR. WARD W. PIERSON

PHOTOS BY PHOTO-CRAFTERS FROM OVERTON

H. S. SHERTZ

A saving of $2,000,000 each year to Philadelphia consumers of anthracite will result directly from the compromise, which was forced upon the carriers by Dr. Ward W. Pierson and Harold S. Shertz, rate experts of this city, representing independent consumers.

For twelve years the national government, thru high-salaried attorneys, in various states fought the railroads in numerous instances in efforts to make them disgorge in rate cases. Twice the United States supreme court was brought into controversies, but all without loss in revenue to the carriers.

Pierson and Shertz originally succeeded in getting the Pennsylvania public service commission to order a $4,000,000 cut in rates, but for two years the carriers delayed, thru legal technicalities, any enforcement of the order. Then, cornered by Pierson and Shertz, they agreed to a "fifty-fifty" compromise, cutting the rates $2,000,000 annually. And the commission's order prohibits any compensating increases by the railroads for three years.

Five coal-carrying railroads are affected by the compromise, which ended a four-year legal battle directed independently by the Philadelphia experts, whose clients were the coal consumers of this city. The reductions forced upon the carriers amounted to 25 cents a ton on prepared sizes, 15 cents a ton on pea and 5 cents a ton on steam sizes.

They could also have continued their attack on the constitutionality of the act creating the public service commission, and they might have taken the case to the United States supreme court.

Gave Railroads Loophole

Whether or not it would be necessary to start all over again with a complaint before the public service commission, in event the fight was carried to the point where the commission's order ostensibly expired, is a fine legal point that has never been threshed out. But the loophole that it offered the railroads to drag the case along interminably convinced all parties anxious to see a reduction in the exorbitant rates that it would be the best policy to compromise.

Accordingly, frequent conferences were held. The railroads put forth a proposition which, it is understood, was immediately rejected by Pierson and Shertz, and negotiations were on the point of being called off when the complaintants' attorneys were asked to submit a counter-proposition. How many exchanges were made could not be learned yesterday.

The railroads and the prosecuting attorneys finally came to a deadlock. Attorney General Brown then was called in and made suggestions which were accepted by both sides. He then suggested the conference of all parties concerned to be held next Saturday morning.

Persons at Harrisburg in close touch with the situation said yesterday that the reduction of the freight rate on pea coal has not been definitely decided upon, but it is understood that it wil lbe about 10 cents a ton. There may also be a reduction of 5 cents a ton on steam sizes.

Present average rates on the three classes of anthracite from the big Pennsylvania fields of Wyoming, Schuylkill and Lehigh to Philadelphia for locl delivery re $1.70 ton on prepared, which includes chestnut and al larger sizes; $1.40 on pea col and $1.25 on steam sizes.

Ship 5,000,000 Tons Yearly

Approximately 5,000,000 tons of all classifications are shipped annually to this city for local consumption by the five railroads named. Altho only the Pennsylvania and Reading have terminals in this city, coal for Philadelphia is transported to these roads by the others from sections of the cial fields tapped by the lines of the Pennsylvania and Reading.

Of this tonnage about 60 per cent is in prepared sizes, approximately 12½ per per cent in pea coal and the rest in steam sizes, buckwheat, rice, barley, etc. Thus the big saving of 25 cents a ton is placed on the sizes most comonly used, where it will be of benefit to the largest number of consumers.

Figures showing the total los of revenue that would result from enforcement of the order of the public service commission were submitted by the five railroads in their appeals from the decision. They are as follows:

Philadelphia and Reading, $2,000,000 annually.

Pennsylvania, $1,500,000 annually.

Central Railroad of New Jersey, $100,000 annually.

Delaware, Lackawanna and Western Railroad Company, $100,000 annually.

Lehigh Valley Railroad Company, $100,-00 annually.

Joint and individual appeals were filed by the railroads in January of 1915, following the issuance of the commission's order. In these it was set forth that "it appears, from the certified record, that a compliance with the order will necessarily force appelants to reduce a large number of intrastate rates within the state of Pennsylvania, in addition to the rate on anthracite coal to Philadelphia for local delivery."

It was also contended in the joint appeal "that the effect of the reduction in rates resulting from the enforcement of said order of said commission will be to decrease the net revenues of appellants by approximately $4,000,000 per annum."

Whether or not the conferees on compromise discussed in any way the possibility that the agreement will force reductions in rates to intermediate points could not be learned. It is known, however, that officials and taxpayers of towns in the state that might use the new rates to this city as basis for attacks on their rates are waiting with a great deal of interest for the final consummation of the case here.

No case against the railroads in recent years h been subject to so much delay as the Philadelphia hard coal freight rate fight It had its inception late in 1912 when Harry E. Bellis, a rate expert, went to Pierson and Shertz and demonstrated that the rates to this city are unfair, discriminatory and excessive, a contention later borne out in the order of the public service commission, written by the late Samuel W. Pennypacker.

The matter dragged along until the summer of 1913, by which time the case had been pretty well prepared. Bellis and his attorneys went thru tons of railroad tariffs on all classes or commodities. They laid the results before several business men's organizations, which decided to file complaints before the old statee railroad commission.

While these petitions were being drawn the case was brought to the attention of Mayor Blankenburg, who referred it to Director Morris L. Cooke, of the department of public works. Cooke was quoted as saying that it was "all rot." Attention of city councils then was called to the case and a resolution was passed, instructing City Solicitor Michael J. Ryan, now a member of the commission, to file an intervening petition for the city.

Ryan appointed Shertd a special assistant city solicitor. Since that time the city has done nothing to back up the efforts of the traffic attorneys to get a deecision. The petitions were filed late in 1913 and hearings were started by the railroad commission in the following year.

Bellis Showed Figures

At first the railroads paid little atteention to the fight. But when Bellis produced figures showing that rates to this city were far higher than for longer hauls elsewhere the railroads got busy. The best railroad lawyers in the past were assigned to the case, and the battle began in earnest.

The fight continued for a full year. Its high light came when the railroads insisted that they had no figures to show the actual cost of transporting anthracite. The commission ruled that unless Pierson and Shertz could give some evidence that such costse could be found it would not order an ejamination of the railroad books.

Just when the attorneys seemed to have been permanently blocked and the case threatened to fall flat, Pierson and Shertz learned that Wharton Barker, one-time Populist candidate for the presidency and noted economist, was said to be in possession of the cost figures. Simultaneously, it was learned that Barker had gone to New York to sail for South America on an extended trip.

One of the lawyers got to the boat on which Barker had taken passage an hour before it sailed. He got a sworn statement that the cost figures were obtainable, with evidence to back it up, and when this was presented to the commission it ordered an examination of the railroad books by a firm of chartered expert accountants.

Within a few weeks this firm turned in a report showing that the actual cost of transporting anthracite to this city was approximately 50 cents a ton. The railroads were charging about $1.70 a ton.

The railroads made vain efforts to prolong the fight, but within a short time the hearings ended. Pennypacker, chairman of the commission, handed down the decision and order, which attorneys for both sides and disinterested lawyers have declared to be one of the most remarkable legal documents of recent years. The decision supported virtually every contention made by Pierson and Shertz, and ordered that the rates be cut 40 cents a ton on prepared sizes and 25 cents on pea, beginning January 1, 1915.

Immediate appeals were filed by the railroads, and there the matter rested until December of last year. In the meantime, Bellis got into other lines and dropped out. So did the business men's organizations. The city did nothing. But Pierson and Shertz continued the fight on their own hook.

Repeated efforts were made to get action by the commission. The attorneys were informed that the delay in filing answer to the appeals was due to the failure of the railroads to print the record. Patterson, chief counsel for the Pennsylvania, insisted that this had no bearing on the action of the commission, that it could go ahead whenever it saw fit. Various other excuses were offered until the action of two months ago, already outlined.

Pierson, senior member of the law firm that won the local reduction, is professor of business law at the University of Fennsylvania, and Shertz is an assistant professor in the same department. When the now-famous Nearing case at the University had its inception some years ago in an effort by reactionary trustees to remove a group of progressives from the faculty, both Pierson and Shertz were slated for dismissal. Publication of the plan kept it from going thru.

TO SAVE CANALS FOR THE FUTURE

STATE ASKED TO TAKE UP SCHUYLKILL PROBLEM

Reading Eagle.

Harrisburg, April 22.—Conservation of the state's water supply and the future development of its rivers and canals as commerce carriers were proposed to the commission on constitutional amendment and revision by representatives of the Pennsylvania State Grange as subjects of prime importance which should be written into the new constitution.

George W. Woodruff, counsel for the grange's legislative committee, laid particular stress on the importance of incorporating in the constitution provisions for canal development and the conservation of the water supply. He called the commission's attention to the failure to mention water specifically anywhere in the new draft.

He urged the adoption of a section patterned after the bill now pending in Congress providing for conservation of federal water power. His suggestion would require a license for the use of water power and would restrict the license to a period of 50 years.

Development of the Monongahela waterway in western Pennsylvania was cited by the speaker as an example of the revival of the waterway as a commerce carrier. He argued that the canal business, instead of decreasing the business of a competing railroad, increases it.

SCHUYLKILL AN EXCEPTION.

Mr. Woodruff commented on the fact that with the exception of the Lehigh and the Schuylkill canals, these waterways had been taken over by the railroad in the early days of competition and virtually abandoned.

Attorney General Schaffer suggested it would be "a bold man who would put money into a canal development unless he was certain that the heavy truck had reached its zenith as a freight carrier."

"I heard Maj. Gen. Atterbury say in France," interrupted Vance C. McCormick, "that the time would come when the United States would depend on the canals as well as the railways as freight carriers. Gen. Atterbury said his experience in France with the French canals and railways proved the operation of the two was feasible."

Edward J. Fox, former Supreme Court justice, quoted a former president of the Lehigh Canal Co. to show that canal development could be looked for in the future. The former canal officer, Justice Fox said, remarked at the time when the canals were being abandoned that they would be rehabilitated some day and converted into great commerce carriers.

TO SPEAK FOR CANAL BILL

J. W. H. Glass, of this city, a candidate for the Republican nomination to the Assembly and vice president of the Schuylkill Canal Association, will go to Washington next week to attend a meeting of the rivers and harbors committee of Congress. The committee will hold a session at 10 a. m. on Tuesday, April 27, at which Mr. Glass will present arguments in favor of the Campbell House bill, providing for the survey of the Schuylkill and other canals. If the Campbell bill passes Congress, engineers will survey the canal with a view to having the federal government take it over and develop it for inland traffic on a large scale.

AIR CANAL PLAN AT WASHINGTON

Fox, for Norristown, and Others Address Rivers and Harbors Body

Norristown Times 4/27/20

VICINITY REPRESENTED

The restoration of the Schuylkill Canal to function as a modern commerce carrier, as was the original intention, was given a decided boost yesterday at a meeting of the Rivers and Harbors Committee of Congress held in the room of the Ways and Means Committee at Washington.

Gilbert R. Fox, Esq., represented the borough of Norristown, and with others interested, explained the necessities of the furtherance of the improvement to the inland waterways.

A large attendance of members from all over the country interested in the improvement of the transportation facilities favored the Campbell bill.

The Watson bill, which carries with it an appropriation to cover the cost of making surveys of all the inland waterways, where there is a possibility of utilizing them for transportation, was first considered and the members of the committee were much interested in the matter inasmuch as the present railroad facilities are at present inadequate.

Mr. Fox heartily supported the Watson bill, as it contains an appropriation for a survey, under the direction of the United States Government, of the Schuylkill Canal, at one time a very busy carrier of commerce.

The sentiment of the committee was favorable to improving the waterways and making them an important part of the transportation system of the country, operating one in conjunction with the other in a vast system and not as has been done in the past as a separate and distinct unit of transportation.

The lack of money for this purpose at this time is the only drawback in the consummation of the project.

There were present representatives from Pittsburgh, Phoenixville, Reading, Norristown and other places, all of which favored the passage of the Watson bill.

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INDUSTRIES AND PLANTS ESSENTIAL TO THE WAR

Chairman Baruch, of War Industries Board, Issues New Priorities List.

TO SERVE AS MASTER KEY

Divided Into Four Classes, According to Their Relative Importance.

Washington, D. C., Sept. 8.—A new priorities list of industries and plants essential to the war or the civil population was announced today by Chairman Baruch, of the War Industries Board. It was described as "the master key" governing the issuance of priority certificates by the priorities commissioner of the board for fuel supply or electrical energy, transportation, material, facilities, capital and labor and as the basis for industrial exemption from the draft.

"The inclusion of the industries and plants on this preference list," said the announcement, "does not operate as an embargo against all others, but the effect is to defer the requirements of all other industries and plants until the requirements of those on the preference list shall have been satisfied.

"Industries have been grouped into four classes according to their relative importance. No distinction, however, has been made between any of the industries or plants within any one class, and it was explained that no significance is to be attached to the order in which they are listed within any class. The industries or plants under Class 1 are of exceptional importance, and include those most vital to the prosecution of the war and the public, and their requirements must be fully met in preference to those of the three remaining classes."

Domestic Fuel in Class 1.

Fuel for domestic consumption—residences, apartment houses, restaurants and hotels—is in Class 1. In that class also are food, railways operated by the Railroad Administration, the army and navy, aircraft, ships and shipyards, war chemical plants, coal mines and by-product coke plants, certain public utilities, ordnance and small arms plants and ammunition and explosives.

Requirements of those grouped under Classes 2, 3 and 4 will be given priority over those not on the preference list, but as between these three classes there is no complete or absolute preference provided. Relative importance of the industries and plants within each group will be the basis of operation.

Each plant listed in the three last classes will be required to file with the War Industries Board before the fifteenth of each month a report of its activities during the preceding month. Failure to comply with this order will mean removal from the preference list. The complete list follows:

Class 1.

Plants principally engaged in producing aircraft, supplies and equipment, ammunition for the United States and the Allies; ordnance and small arms for the United States and the Allies; chemicals for explosives, ammunition and aircraft and use in chemical warfare; metallurgical coke and by-products, including toluol; explosives for military purposes; feed for live stock and poultry; food, including cereals and cereal products; meats, including poultry and fish; vegetables, fruit, sugar, syrups, glucose, butter, eggs, cheese, milk and cream, lard, lard compounds, oleomargarine and other substitutes for butter or lard, vegetable oil, beans, salt, coffee, baking powder, soda and yeast, and ammonia for refrigeration; fungicides, oil and natural gas for fuel or mechanical purposes (including pipe lines and pumping stations); toluol (gas plants); ships, other than pleasure craft or vessels not built for the United States or the Allies or under license of the Shipping Board; steel plants; plants producing solely steel ingots and castings by the various processes; domestic consumers of fuel and electric energy for residential consumption, including homes, apartment houses, residential flats, restaurants and hotels; coal mines, arsenals, cantonments and camps of the army and navy yards, railways operated by the United States Railroad Administration; maintenance and operation of ships, excluding pleasure craft, not common carriers, and maintenance of public buildings used as hospitals or sanitariums.

Class 2.

Plants principally engaged in producing locomotive or traveling cranes, rolling and drawing copper, brass and other copper alloys, coke not otherwise classified and listed, ferro alloys, machine tools and wire rope; blast furnaces producing pig iron; steel rail mills (producing rails over 50 pounds per yard); construction work of the War or Navy Departments in embarkation ports, harbors, fortifications, flood protection, operations, docks, locks, channels, inland waterways and in maintenance and repair of same; mines producing metals and ferro alloy minerals; street railways, electric lighting and power companies; gas plants not otherwise classified; telephone and telegraph companies, water supply companies and like general utilities; railways not operated by the United States, excluding those operated as plant facilities.

Class 3.

Plants engaged principally in producing food not otherwise listed, not including soft drinks, confectionery and chewing-gum; ice, mining tools and equipment, equipment and supplies for producing or transporting oil or gas for mechanical purposes, iron and steel chains, electrical equipment, explosives not otherwise listed; tinplate and small or hand tools for working wood or metal; fuel and electric energy for domestic consumers not otherwise listed; steel rolling and drawing mills not otherwise listed; maintenance of public buildings other than those used as hospitals and sanitaria.

Class 4.

Laundries, plants engaged principally in producing manufacturing hemp, jute and cotton bags, manufacturing chemicals not otherwise listed, medicines and medical and surgical supplies, fertilizers, fire brick, gray iron and malleable iron castings, food containers, insecticides and fungicides, soap, tanned leather and tanning extracts, cotton and woolen textiles, including spinning, weaving and finishing, cotton and woolen knit goods, textile machinery, binder-twine and rope; plants engaged exclusively in manufacturing boots and shoes; plants engaged exclusively in manufacturing pulp and paper; cotton compressors; plants engaged principally in producing newspapers or periodicals which are entered at the postoffice as second-class matter; plants preserving, drying, curing, packing and storing tobacco, but not for manufacturing and marketing.

vent the district board from holding as necessary any industry, occupation or employment, including agriculture, not contained therein. Such preference lists and other facts and information in the possession of such advisers will supplement the information in the possession of the district boards and will also be used to assist the district boards in dealing with specific cases.

Special Facilities for Board

"Inasmuch as the United States employment service under the Department of Labor already has established throughout the nation State advisory boards and numerous recruiting agencies in divisions of the country, and is therefore familiar with the needs for skilled labor in each community and the supply in each community, the advice of the industrial adviser nominated by the Department of Labor will be of great value to the district boards in arriving at their decisions as to whether or not individuals engaged in certain industries, occupations or employments are engaged in work necessary to the maintenance of the military establishment, the effective operation of the military forces or the maintenance of the national interest during the emergency.

"The Department of Agriculture has special facilities for being informed as to the supply of labor for agricultural purposes and the demand for such labor in the various communities of the nation, and such information will be through the adviser nominated by the Department of Agriculture available to the district boards and helpful in assisting such boards in determining the claims by or in respect of registrants based upon their engagements in agriculture.

"The necessity of not seriously interfering with certain occupations and employments, such as financial, commercial, educational, hospital work, care of the public health, or with the conduct of certain other activities necessary to the public welfare and the prosecution of the war, requires that the district boards have the co-operation of such advisers so that persons necessary in such activities be not removed therefrom. To this end the adviser nominated by the district board should bring to the attention of the district board the questions as to whether or not individuals engaged in some particular industry, occupation or employment are so necessary thereto as to outweigh the benefit to the nation should they be drafted into the army.

Access to Questionnaires

"Such advisers shall under rules to be prescribed by the local boards have access to the questionnaires and other records in the files of the local boards, and shall confer with persons engaged in various industries, occupations and employments for the purpose of having the cases of certain individual registrants, by whom or in whose behalf no claim for deferred classification has been made, presented to the district board for consideration and determination as to whether or not such registrants should be placed in a deferred class.

Classification of Experts

Rule XXIV. In Class 2 shall be placed:

(d) Any registrant found to be engaged in a "necessary" industry or occupation, or employment and found to be "necessary" therein in the capacity of a laborer worker or employe especially fitted for the work in which he is engaged.

Rule XXV. In Class 3 shall be placed:

Any registrant found to be engaged in a "necessary" industry, or occupation, or employment and found to be "necessary" therein in the capacity of—

(k) As highly specialized expert.

(i) An assistant or associate manager of the industry or in the occupation, or employment, or a manager of a substantial integral part thereof.

Rule XXVI. In Class 4 shall be placed:

(d) Any registrant found to be engaged in a "necessary" industry, or occupation or employment and found to be "necessary" therein in the capacity of sole managing, controlling and directing head thereof.

War Workers Classified

General Crowder does not provide a blanket exemption for men in the service of the Young Men's Christian Association, the Knights of Columbus, the American Red Cross or the Jewish Welfare League, which are the uniformed auxiliaries of the military establishment. He provides that all such men shall have to present claims for deferred classification in exactly the same manner as the claimants for industrial exemption, and that they shall be classified according to the various grades of their importance.

His ruling in this respect is included in the revised regulations as a special lations follow:

Note 1. Persons claiming to be necessary to organizations that are claimed to be necessary to the maintenance of the militarty establishment or effective operation of the military forces or the maintenance of national interest during the emergency, such as American Red Cross, Young Men's Christian Association, Knights of Columbus, Jewish Welfare League, may make claims as being engaged in occupations or employments under Sections 80 to 89, inclusive, and such claims must be supported by affidavits as provided in respect of industrial claims in the questionnaire.

General Rules

Rules XV, VI and XVII, quoting the general classification rules of the regulations follows:

Section 81. General classification rules applicable to industries, occcupations or employments, including agriculture.

Rule XV. The words "persons engaged in industries, occupations or employment, including agriculture," as used in the selective service law, shall not be construed to mean that a person so engaged is entitled to deferred classification merely by reason of the fact that the industry, occupation or employment, taken as a whole, or agriculture taken in its entirety, is necessary to the maintenance of the military establishment or the effective operation of the military forces or the maintenance of national interest during the emergency. In order to support such deferred classification the evidence must establish that the registrant is engaged in a particular industrial or agricultural enterprise or occupation or employment, and that the particular industrial or agricultural enterprise or occupation or employment is "necessary" in the sense recited in Rule XVII.

Boards to Rule on "Necessary"

Rule XVI. In acting on any claim for deferred classification based on engagement in a particular industry or occupation or employment or agricultural enterprise, the board shall first proceed to determine whether such industry or occupation or employment or agricultural enterprise is "necessary" in the sense recited in Rule XVII. If the board does not find that such industry or occupation or employment or agricultural enterprise is "necessary" in such sense, the claim is closed, and the registrant shall be classified in class 1.

If the board determines that the industry or occupation or employment or agricultural enterprise is "necessary" it will then proceed to determine whether the registrant is "necessary" thereto in the sense recited in Rule XVIII and in the capacity recited in any of the various rules in the classification schedule. If the board does not find that the registrant is "necessary" in such sense and in any such capacity the claim is closed and the registrant shall be classified in Class 1.

Work Must Be Vital

Rule XVII. The word "necessary" as applied to any industry or occupation or employment or agricultural enterprise within the meaning of these regulations shall be taken to import that the discontinuance, the serious interruption or the materially reduced production thereof or the discontinuance or serious interruption thereof will result in substantial material loss and detriment to the adequate and effective maintenance of the military establishment or the effective operation of the military forces or the maintenance of national interest during the emergency.

A particular industry or occupation or employment or agricultural enterprise shall be found to be "necessary" only when it is shown that it is contributing substantially and materially to the maintenance of the military establishment or the effective operation of the military forces or the maintenance of national interest during the emergency; and in the case of a particular agricultural enterprise that is providing an appreciable amount of agricultural produce over and above what is necessary for the maintenance of those living on the place.

General Crowder's statement to the members of local and district draft boards on the general purposes of deferred classification for men engaged in essential industries and occupations and the procedure to be followed in acting on such claims follows:

"District boards are charged with the duty of selecting the individuals whose engagement in industry, including agriculture or whose occupations or employments are such as to require their continued service in civil life rather than in the army.

Three Advisors for Each Board

"In order to provide for the necessary adjustments between the necessities of the military establishment and the requirements of the industries occupations and employments, including agriculture, found to be necessary to the maintenance of the military establishment, the effective operation of the military forces and the maintenance of the national interest during the emergency, there shall be appointed by each district board three persons to be known as industrial advisors to the district board.

"One such person for each district board shall be nominated by the Department of Labor, one by the Department of Agriculture and one by each district board, who shall thereupon be appointed by the respective district boards.

Advisers Have No Vote

"Whenever in the discretion of the President more than three such industrial advisers are required by a district board, the President may call upon the Department of Labor or the Department of Agriculture or the district board to nominate such additional industrial advisers, who shall thereupon be appointed by such district board.

"Such industrial advisers so appointed by each district board shall not in any sense be members of such district board, shall have no right to vote at any meetings thereof, and shall have and exercise only the rights, duties, powers and functions herein specifically given.

"Such advisers shall have the right to furnish all pertinent information to the district board and may attend meetings of the board upon request of the board to which they are attached.

"Such advisers may place before the district board at its meetings, or at such other time as the board may request, all facts and information in their possession as to the preference lists issued by the priorities division of the war industries board.

"Such lists shall not be regarded as binding upon the district board in its conclusions as to whether or not any particular industry, occupation or employment, including agriculture, is a necessary industry, occupation or employment within the meaning of the law and regulations; nor shall such lists prevent the district board from holding as necessary any industry, occupation or employment, including agriculture, not contained therein. Such preference lists and other facts and information in the possession of such advisers will supplement the information in the possession of the district boards and will also be used to assist the district boards in dealing with specific cases.

Extension of Time Provided

"If any such adviser files with the district board a claim on Form 1001-A for deferred classification on the ground of a registrant being engaged in a necessary industry, occupation or employment, including agriculture, the district board shall forward such claim to the local board having jurisdiction, and upon receipt thereof it will be the duty of such local board to certify the questionnaire and record of any such registrant to the district board for consideration, although no claim by or in respect of such registrant for deferred classification has been made or such registrant has waived deferred classification: Provided the day and hour fixed to report for military duty has not arrived.

"If the information and the affidavits necessary for the classification of the registrant because of his engagement in a necessary industry, occupation or employment, including agriculture, are not contained in the questionnaire of such registrant it shall be the duty of such local board to give the opportunity, by reasonable extension of time, to those interested in obtaining a deferred classification to furnish the information and supply the affidavits required by the questionnaire and the regulations. Pending the final classification of such registrant he shall not be inducted into military service.

Co-operation Urged

"It shall be the duty of such advisers to confer with the managers and heads of various industries and those familiar with the needs in occupations and employments including agriculture, and instruct such persons as to their right under the regulations to file a claim for deferred classification in respect of any registrant who has failed or refused to file a claim for deferred classification in his own behalf or who has waived his claim for deferred classification.

"Such advisers should in all ways co operate with the district boards in order that the information in their possession may at all times be available to the district boards and be made use of in the work of classifying registrants.

"If, under the authority of rule xxvii, section 101, a local board determines to consider a case for deferred classification because the registrant is engaged in a necessary industry, occupation or employment, including agriculture, notwithstanding no claim for deferred classification on that ground has been made, the local board shall, after indorsing the recommendation on the questionnaire, forward the questionnaire and record to the district board having jurisdiction. The district board shall thereupon consider the case and proceed to classify the registrant, notwithstanding the fact that no claim for deferred classification by or in respect of the registrant has been made."

ECONOMY IN COAL USE SAID TO BE SOLUTION OF PRICE DIFFICULTY

Public Ledger 6/5/19

George Otis Smith Declares Conservation Essential to Country's Industrial Prosperity—Supply Running Out

WHOLESALE ASSOCIATION URGED TO PLEAD AGAINST RAILROAD OWNERSHIP OF MINES

George H. Cushing Advocates Return of Roads to Private Control Only on Condition That Coal Lands and Mines Be Abandoned

Cleveland, June 4.

AN urgent plea for economical use of coal throughout the country was made today by George Otis Smith, director of the United States Geological Survey, before the American Wholesale Coal Association here. The association heard addresses also by George H. Cushing, on railroad ownership of coal lands, and by Gibbs L. Baker, on taxes.

"More than half of the world's estimated supply of coal," said Mr. Smith, "is in the territory of the United States, and last year our mines contributed not less than 48 per cent of the world's coal. That percentage measures the share of our coal industry in the world's business—for relatively few of the wheels of modern industry or commerce can turn unless coal furnishes the energy.

"However, our first impressions as to America's wealth may be too optimistic and we may need to think less of the millions of millions of tons of coal which we are told lie awaiting our needs and to ask for more details as to where this coal is and how much of it remains in the older mining districts. With the passing of time in our rapid industrial expansion we may expect for our future coal output decreasing quality and increasing cost.

Exhaustion in Generation

"We should try to picture the rate at which we are using up the fuel reserves upon which so many industries are founded. The Pittsburgh coal furnishes two excellent examples of the rate of exhaustion. If it is mined at the present rate, the exhaustion of this coal bed, the largest in Pennsylvania, must be measured by the span of a single generation; at least we can see the peak of production close at hand if indeed it has not already been passed, and long before the end of this century coal mining in the Pittsburgh field will be a memory except where a mine here and there is working on odds and ends left behind in the big days of the Pittsburgh coal.

"The reason for my interest in the past and future of coal lies in my strong conviction that coal will count for more and more as the controlling factor in America's industrial future. Even now we can take our country's record of the highest per capita coal consumption in the world as the gratifying test of our industrial capacity.

(2.)

The theory put forth last year by an economist that the balance of political power in Europe must be secured through a more equal division of coal lands seems to be indorsed in part in the pending peace treaty. At least during the war period we have seen France, despoiled of her coal mines, turning more and more to water power, and Italy, without coal resources, harnessing up her mountain streams for power, and England appointing commissions to consider ways and means of saving coal by getting the greatest possible energy out of the coal she burns. The American is recognized as the world's greatest user of machinery, and so these British commissions are now putting emphasis on cheap power as vital to industry. Great Britain, being without water power, must depend on coal.

"As I talk with electrical engineers I can foresee no encroachment of electricity upon coal for heating. That would involve too large a waste of energy. As one engineer described it to me, using the electric curent for heating is like using your limousine as a truck; it is not good engineering practice.

Must Conserve Resources

"The duty that is plain to each of us is to get the most out of our resources. You can call that either exploitation or conservation as you will, but it is simply good engineering. As applied to coal, good common sense practice is to use as much coal as we need, but no more. Use coal when it saves or increases man-power, but save coal when something else will do the work as well. That is the water-power issue as I see it—the waterfall is not a rival to the coal mine, but is its partner. Hitch up the coal and the water—they work best in double harness.

"So the power program that I am advocating means not simply saving in coal; it means saving in man-power. It is with this purpose of economizing in both coal and men that a power program has been proposed by Secretary Lane. This project, which is now only in the vision stage, is to pool the power supply for the whole industrial area between Boston and Washington, in which is concentrated one-fourth of the power-generating capacity of the country.

(3.)

"My answer to your problem of getting a fair price for the coal you put on the market is that the coal-saving program I have outlined will increase the value of your coal. Price must be based upon cost, but value connects back with use, and the result is that increase in cost necessitates higher prices until we might reach the point where the coal was not worth the price. It is already high time to give a larger value to coal, but I believe the increase in value can come only through conservation in use—through higher efficiency in burning the coal.

Efficiency Safety Factor

"Increased efficiency is really the factor of safety to you men in the coal business. A power program that works out any large gains in fuel economy is a program that you can afford to indorse. As Floyd Parsons put it in the Coal Age two weeks ago, if coal operators continue to be indifferent to the methods of coal consumption, the immediate future lies dark ahead,' and 'private interests must at least give way to national economy.'"

George H. Cushing, managing director of the American Wholesale Coal Association, dealt with railroad ownership of coal lands and declared his conviction that the association should at once take a definite position as against control of the coal lands or coal mines by the carrier, and should urge congress to take this matter into account when returning the carriers to private control.

Mr. Cushing described various methods used by the railroads to swing coal prices according to their own interests and to gain control of additional coal mines in desired localities at prices which worked hardship on the independent operator forced to sell his property. He showed how such manipulations compelled the public often to pay a part of the railroads' coal bills.

"The aim of the railroad," he said, is to reduce the price at which it buys its coal to a point where it yields the operator less than the cost of production. When by these various devices that happens, it means that the railroad is paying less than the cost of production, and, therefore, the public is forced to pay considerably more than the cost of production. This means in essence that the public is paying part of the railroads' fuel bill. This is precisely what has been happening through a long period of years."

RETAIL FOOD PRICE REDUCTION SLIGHT

RUCTIONS AT

April 19" 1921

Fails to Reflect Drop by Producers and Wholesaelrs, Labor Department Shows

MARCH DECLINE 1 PER CENT

Philadelphia Quotations Show Exact Average on 43 Articles in 51 Cities

1921.

Public Ledger Bureau
Washington, April 18

The contention of the Federal Trade Commission laid before President Harding yesterday that retail prices are not fairly reflecting the drop in producers' prices or even wholesale prices is borne out by figures on retail food costs for March made public today by the Department of Labor.

A decline of only 1 per cent in the retail cost of food to the average family in March as compared to February is noted by Labor Department statisticians on prices reported on forty-three food articles in fifty-one cities. The Government report shows the decline in Philadelphia was exactly the 1 per cent average noted by the department for the fifty-one communities. The greatest decrease, 4 per cent, was shown in Los Angeles and Rochester. Increases, however, were noted in Louisville, Chicago, Kansas City, Memphis, Milwaukee, Minneapolis, Peoria, St. Paul, Detroit, Omaha and Springfield Ill. As compared with the average cost in the year 1913, the cost of food in March showed an increase of 55 per cent in Philadelphia.

The evidence that retail costs have not kept pace with the decrease in wholesale and producers' prices is demonstrated in the figures for the year, March 15, 1920, to March 15, 1921. During that period retail prices show a decline of only 22 per cent, while wholesale prices have declined from 36 to 40 per cent and producers' prices in many instances from 75 to 100 per cent.

During the year retail prices of thirty-nine of the forty-one articles of food decreased as follows:

Potatoes, 63 per cent; onions, 60; cabbage, 52; granulated sugar, 48; rice, 47; lard, 36; crisco, 34; oranges, 30; navy beans, 29; prunes, 27; cornmeal, 26; strictly fresh eggs, 25; soffee, 24; butter, 23; canned tomatoes, 22; oleomargarine, 21; flour, 20; bacon, 17; plate beef, lamb and nut margarine, 14; chuck roast, pork chops, baked beans and canned corn, 10; cheese, 9; fresh milk, 8; round steak, 7; rib roast, bread and corn flakes, 6; ham, hens and canned peas, 5; sirloin steak, 4; evaporated milk and tea, 3; canned salmon and rolled oats, 1 per cent.

The four articles which increased in price during the year were: Raisins, 20 per cent; macaroni, 4 per cent; cream of wheat, 1 per cent. The price of bananas increased less than five-tenths of 1 per cent.

PUBLIC ASKED TO HEAR DISCUSSIONS ON CANAL

Rdg News-Times 1/20/20.

The general public is invited to attend the meetings of the Schuylkill Canal Improvement Association, which will be held Wednesday in the Hotel Berkshire. The first meeting will begin at 10 o'clock in the morning and an open forum will be held following a dinner at 6 p. m.

Delegations from practically all the cities in the Schuylkill va' will be present and take part in the discussion. Reservations for the dinner can be made by applying to Councilman D. Elmer Dampman, of Reading, who is treasurer. Judge Moyer, of Schuylkill county, has sent word that he regards the project as a national one, and expects to attend every session of the conference.

READING COULD BE INDEPENDENT

OF RAILROAD TIEUPS IF THE SCHUYLKILL CANAL WERE IMPROVED

Rdg. Eagle 4/25/20

Members of the Schuylkill Canal Improvement Association believe that the recent railroad tieup caused by the "vacation" of employees will stimulate the campaign to reopen navigation from the anthracite fields to tidewater by way of Reading.

They point out that had the canal been open during the period that freight embargoes embarrassed industrial plants in this and other cities to such an extent that many of them had to suspend operations, fuel could have been brought to Reading from the coal regions via the canal and food could have been shipped up the river from Philadelphia.

The railroad tieup emphasized with telling effect the incalculable advantage of having a supplementary means of transportation available in an emergency. Even in normal times, it is pointed out the water freight would supplement the railroads and have a tendency to keep down the rates.

The first annual convention of the Schuylkill Canal Improvement Association, which was formed for the purpose of canalizing the Schuylkill canal from the coal regions to tidewater, was held Wednesday, Jan. 21, 1920, at The Berkshire. Representatives were present from every city and town along the Schuylkill from Pottsville to Philadelphia. A permanent organization was effected.

Results Expected.

Later a second meeting was held at Phoenixville when plans were further outlined. In the meantime, a committee representing the Improvement Association visited Washington and took up the matter with the inland waterways commission, and those at the head of the movement, including J. W. H. Glass, of this city, chairman of the executive board, are confident that material results will soon develop.

There is now pending in the House of Representatives' committee on rivers and harbors, the Campbell bill, H. R. No. 6852, which vitally affects the Schuylkill canal. The interest already manifested by communities along the Schuylkill canal augurs well for the projected improvements.

With fleets of canal boats operating daily, during eight or nine months of the year, Reading could be placed in a position that would make it practically independent of railroad tieups.

TRYING TO HAVE CANAL OPENED FOR BUSINESS

Rdg. Eagle ——— 1/21/20.

WATERWAY CONVENTION IS HELD IN THIS CITY--ADDRESSES

State and other public officials, together with prominent citizens from various parts of the Schuylkill Valley vitally interested in transportation projects, were present at the opening session of the convention of the Schuylkill Canal Improvement Association, which is holding forth at The Berkshire. The convention was called mainly for the purpose of formulating plans for the enlistment of state and federal aid to reopen the canal as an artery of navigation. Delegates from various places along the route of the waterway were present and told how the canal situation, as it appears at present, affects their respective communities.

WELCOMED BY MAYOR.

Mayor Stauffer and members of council were among the guests. The mayor delivered the address of welcome in which he acquainted the visitors with the favorable viewpoint he and other city executives have come to regard the canal opening project.

The meeting was called to order by J. H. Zerby, of Pottsville, president of the association. W. L. Binder, of Pottstown, served as registration secretary. Rev. William B. Smith, pastor of St. Peter's Lutheran Church, offered prayer in the absence of Rev. Dr. Scott R. Wagner, of the Second Reformed Church.

MILLION TONS OF FREIGHT.

Mayor Stauffer in his address recalled when the usual time for the opening of the boating season was put off time and time again and finally the channel was closed to navigation. He said: "There is no reason why the canal, if restored to its proper functioning, cannot be of great public service as a carrier of heavy tonnage, thereby reducing congestion on the railroads." As an illustration as to some of the benefits that could be derived from such an inland waterway he told of how he knew of the plans of one concern which would be in position to start shipping at once for building purposes anywhere along its route 1,000,000 tons of slag. As it is now, the concern is unable to ship by any other method on account of the increased transportation rates.

The mayor stated that anything that could be done to improve transportation facilities should be supported by all citizens. He said they should regard it entirely as an industrial and commercial proposition.

NOW A NUISANCE.

Mr. Stauffer pointed out also that the canal in its present state had caused a big nuisance to municipalities along its route through its accumulation of deposits of culm. He explained to the delegates how during the time he served as councilman and up to the present this community has been persistently annoyed with the culm nuisance. "It is a growing menace and a nuisance," he said, and "I believe that the canal association could do much towards remedying the matter if taken up with the proper authorities."

"Reading is showing a tremendous interest in all problems of traffic and initial steps should now be taken to have the canal opened. The matter of adequate transportation and proper terminals is becoming more serious. The canal project is really an intercity business matter and of great importance to thousands of people."

HISTORICAL SKETCH.

J. W. H. Glass, of this city, who is first vice president and chairman of the executive board, gave a historical sketch of the canal. He has been a leading factor in the matter of endeavoring to interest state and federal aid in putting the canal back to the original purpose it once served when it was considered as one of the leading transportation arteries in this state.

An interesting talk was given by Burd S. Patterson, secretary of the Lake Erie and Ohio River canal board of Pennsylvania. Mr. Patterson, a former newspaperman, spoke on "Co-operation and Legislative Action."

Practically all the other delegates voiced their opinions as to what policies should now be pursued by the association in striving after its objective.

TIME FOR ACTION.

"This is the time for deliberate action.

"Unfortunately, canal movements have from time to time been placed before Congress, but have always been pushed aside by that body," said J. H. Zerbey, of Pottsville, president of the organization. He stated that considerable work must be accomplished by the association before Feb. 21, at which time the rivers and harbors committee of Congress convenes and when it is hoped that body will consider the association's efforts in a favorable light.

Referring to control of waterways by railroads, Mr. Zerbey said: "I'm not opposed to corporations, but we must not let them scare us. The bulk of the larger corporations I have found at heart are not philanthropic. All that we must expect from the railroads in this project is that they play fair with the general public."

Mr. Zerbey spoke of the drawbacks that have been suffered by Schuylkill Haven, Port Carbon and other places in the coal regions through the canal having been closed.

This afternoon there were addresses by James H. Craig, deputy secretary of internal affairs of Pennsylvania, and George M. Lehman, engineer, Department of Internal Affairs of Pennsylvania.

At 6 o'clock this evening there will be a dinner at the hotel, followed by an open forum.

SCHUYLKILL CANAL PLAN IS INDORSED

Norristown Daily Times – 1/20/20

Governor Sproul, Senator Knox and Seven Congressmen Back Project.

J. W. H. Glass, Reading, vice-president of the Schuylkill Canal Improvement Association made up of various towns and cities in the Schuylkill Valley has received letters from Governor Wm. C. Sproul, Senator P. C. Knox and from seven Congressmen, endorsing the project of opening the canal for traffic.

The Association will hold a convention at Reading tomorrow to consider ways and means of interesting the federal government in converting the old canal, now virtually abandoned into an anthracite coal carrier from Pottsville to Philadelphia about one hundred miles and to restore it to usefulness for general bulk freight traffic. J. H. Zerby, of Pottsville, is president of the association which organized at Washington, D. C., last month with Mayor John K. Stauffer, of Reading, as one of its boosters.

James H. Craig, deputy secretary of internal affairs and George M. Lehman, a state engineer acquainted with waterways systems will attend the convention.

The seven congressmen sending letters promising aid of a federal bill to restore the canal or otherwise supporting the move are Arthur G. Dewalt, Harry W. Watson, Thomas S. Butler, George P. Darrow, M. M. Garland, G.W. Edmonds and Guy E. Campbell, who has a canal bill now before congress.

6 YEARS' LEAP IN LIVING COST

Increase Has Been 104.5 Per Cent. Since Pre-War Times 1921

(By Associated Press.)

New York, Sept. 13.—Report of a survey of the cost of living contrasted with living costs of pre-war times is made public by the National Industrial Conference Board. It shows the increase in the six-year period ending July 1 has been 104.5 per cent. There was an increase of 19 per cent. in the last year and 5 per cent. from March, 1920, to July.

Food increased 119 per cent. in price in the six-year period; shelter 59 per cent.; clothing 166; fuel, heat and light 66, and sundries 85.

These percentages are based on retail prices in large cities.

Figures supplied by 361 real estate boards and brokers, Chambers of Commerce and civic organizations in virtually all cities having a population exceeding 50,000, gave a rent increase percentage of 58. Eighty-six cities, among which were New York, Chicago, Philadelphia, Detroit, Los Angeles, Pittsburgh, Baltimore and Cleveland, showed increases of 50 per cent.

Hard coal prices increased 81.4 to 85.5 per cent., soft coal 103.1 per cent. and gas and electricity for domestic use 15 per cent.

BOY MEETS DEATH IN CANAL

Phila. Record. Apr. 10, 1916.

Icy Plunge Fatal Despite Brave Efforts at Rescue.

Although brave efforts were made to save Frank Miller, a 14-year-old boy, of No. 4672 Umbria street, Manayunk, who fell into the Manayunk Canal, at Leverington avenue, about a block and a half from his home, last night, the boy died in St. Timothy's Hospital. Death was caused by shock and chill caused by the ice-cold water, according to the doctors.

Young Miller and several boy companions were playing on a lumber pile about 6 o'clock last night when Miller, losing his balance, fell into the canal, sinking almost immediately. John Wrigley, 42 years old, a neighbor living at No. 4745 Umbria street, who was passing, heard the screams of the other boys, and, running to the canal bank, dived into the icy water.

The boy, who was still breathing, was taken to the hospital, where he died about 8 o'clock. Wrigley, who is suffering from the shock of his experience, is under the care of Dr. D. D. Custer, a police surgeon.

WANTS RIVER POLLUTION BY COLLIERIES STOPPED

Special Dispatch to The North American

POTTSVILLE, Pa., June 12.—A suit to test the right of coal companies of the state to dump coal dirt and refuse into the rivers is on trial before Judge Bechtel. The defendant is the Lehigh Coal and Navigation Company. Jacob Zehner, the complainant, asks that the coal company be restrained from polluting the waters of the Schuylkill river, because of which pollution his flour and saw mills are blocked from water motive power.

The defendant takes the position that they are not liable for pollution of the stream by acidulated mine water. It admits that for every ton of coal mined, twenty-five tons of water are hoisted, impregnated with coal dust, and declares that if the privilege of pouring these great streams of water into the rivers are denied to coal companies, they would have to go out of business.

H. C. L. 68 PCT. ABOVE 1914; 7.7 BELOW FEBRUARY LEVEL

Apr. 1921.

Food Shows Greatest Price Decrease —200,000 Men Idle Here

Living costs in Philadelphia are 68.6 per cent. above those of July, 1914, it is reported by the National Industrial Conference Board.

This is a drop of 7.7 per cent. below the figures reported by the Board in February. The drop in March was 14 per cet. in food; clothing, 5 per cent.; fuel and light, 1 per cent; sundries, 5 per cent., with shelter at the same level as October.

Among the wage reductions made in this city are: Lumber and its associated branches, 10 to 20 per cent.; metal trades, 14½ per cent.; tin plate and its allied groups, 20 per cent.; cabinetmakers, 13 per cent., and leather, 25 per cent.

A cut of 23.93 per cent. for workers in the building trades is scheduled to become effective May 1. The new scale would give the following rates of pay per hour:

Carpenters, 90 cents; bricklayers, masons and plasterers, $1; cement finishers, 80 cents; dock builders, 80 cents; elevator constructors, 90 cents; electricians, 90 cents; iron erectors, 90 cents; lathers, 90 cents; marble setters, 80 cents; painters, 80 cents; plumbers, 90 cents; slag roofers, 60 cents; slate and tile roofers, 90 cents; sheet metal workers, 90 cents; steam fitters, 90 cents; soft stone cutters, 90 cents; granite cutters, 90 cents; tile setters, 80 cents; hoisting engineers, 90 cents; pipe coverers, 80 cents, and automatic sprinkler setters, 80 cents.

Figures based on estimates of employers show there are nearly 200,000 workers unemployed in this city at present. Sixty thousand of them are in the building trades.

CANNOT KEEP THE CANAL OPEN

FELIX'S DAM IS CAUSING THE TROUBLE

Rdg. Eagle 4/11/16

NOW PAYING FOR THE CARELESSNESS OF YEARS AGO — WHAT OF THE FUTURE?

While preparations have been made to handle the coal to be delivered at the new wharf of the Schuylkill Navigation Co. at the foot of Blue Mountain dam, the conditions of the dams north of this city have been a source of great disappointment.

During a visit to one of the locks north of the city the Eagle learned that Felix's dam, which is known as the three-mile level, is giving the canal people all sorts of trouble. Recently the channel was opened to a depth of eight feet after a hard day's work. The following morning there was less than four and a half feet of water.

Today there is not more than a foot of water running over the culm. It may be possible to get the empty boats up stream, but when loaded it is feared that it will be impossible to drag them through. The company has never had so much trouble in this level. It is thought that it is due to the break in the dam breast above some time ago, during which thousands of tons of culm and mud were washed into this level.

In the early days, when hundreds of boats were employed on the canal all of these dams were free. The freshets which have occurred in recent years have gradually carried down thousands of tons of culm which has found lodgement in these dams, and it would cost a vast sum of money to clear them of it.

Channel Filled.

One bad feature is that every heavy rain which causes the Schuylkill to rise above the ordinary shifts the culm and fills up the channel so quickly that it is simply impossible to keep it open. Years ago these dams held immense bodies of water and the depth varied from 15 to 25 feet.

Kissinger's, Shepp's and Felix's dams, all of which are below Felix's are said to be in pretty good shape and the boats have little trouble in getting through, although they, too, have gradually been filling up with culm washed down from the vicinity of Pottsville and Tamaqua. It is said that the condition prevailing in Felix's dam is similar to that of the Blue Mountain dam.

Thousands of Tons of Coal.

It is claimed by some boatmen that if the culm was to be removed from all of the dams, many thousands of tons of the smaller sizes of anthracite, such as rice and buckwheat, could be secured. Boatmen have very little hope of doing much boating this season. Some coal is now being loaded at the dock for Hamburg, but nothing this side.

Carelessness Is Costly.

For years the coal companies were more or less careless in depositing the culm near the streams. Heavy rains washed it into the river and its tributaries. Finally it was brought down the valley by the freshets. This has been going on for years and eventually the black deposit will reach Fairmount Park.

These deposits have ruined hundreds of acres of farm land as far south as Douglassville, for which the coal companies have been obliged to pay heavy damages.

Heavy Damages May Be Claimed.

Pottstown, Phoenixville, Norristown and Philadelphia get their water from the river. The culm and sulphur may eventually ruin this supply. The black menace has now reached Pottstown. There is a possibility this factor may mean damage suits that will be far more costly than the damage to farm land along the river.

Now the culm is practically closing the canal at some points. This may eventually be given as the cause of stopping navigation. The company enjoys a large income from its water rights at different points between here and Philadelphia.

What of the Future?

The question is being asked: If boating stops, can the company retain its charter, or will it become the same as the Union canal today? The latter was in the courts for years. It was contended that when the Union canal was abandoned the land went to the abutting property owners.

In years to come similar litigation will likely be instituted in the courts of Schuylkill, Berks, Montgomery and Chester counties.

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AUGUST 24, 1922

RISDON PLAN TO SOLVE BOROUGH ELECTRIC LIGHT-MAKING PUZZLE

Calls for Diesel Engines, Which Use Crude Oil; Production Cost as Little as Water Power or Less.

WHARF IS MENTIONED AS A POSSIBLE SITE

Councilmen Pifer and Fratt Much Impressed; Matter Will Be Laid Before Legislative Body at Early Date.

A plan will be laid before Norristown Town Council in the near future relative to the electric current supply for the borough. It involves the erection at some point other than the present site of a power plant which will house engines of a novel design—engines, according to authorities, which will produce the desired current at a cost as low as that produced by the present water turbines and possibly lower.

The lease on the building housing the borough's electric light plant will expire in November next, and a number of Councilmen are desirous of having the municipality to continue in the supplying of juice. One group, of which George Fratt and George Pifer are members, consulted William G. Risdon, Sr., who for many years has had charge of the operation of the town's plant. Mr. Risdon answered the appeal by laying before them the outlines of the plan which is to be explained to the body at an early session.

Reference to Diesel Engines

Mr. Risdon advocates the installation in a suitable structure of generators driven by Diesel engines of the most modern design. These are internal combustion engines, and use as fuel the very lowest and cheapest grade of crude oil. They operate on practically the same principle as does the engine in the present day motorcar, provision being made for vaporizing the scantily volatile crude oil. This has been done for many years, but constructional features have been steadily improved upon by the designers until today engines are on the market which operate at a less cost than the most economical steam engine. Mr. Risdon has gone on record as saying that the cost of production with these will be as cheap as, if not cheaper than, the cost of production utilizing water power—one-half cent per kilowatt.

Mr. Risdon, in an interview with a representative of The Times, last evening, cited recent experiments made by the United States Navy in which a large ship equipped with Diesel engines made a run from New York to San Pedro, California, a distance of 4800 miles, the cost of operation being $12,000 less than the cost of the same voyage made by a steam of the same class as the vessel experimented with.

Operation Cost Cheap

"The first cost of such a plant," said Mr. Risdon, "is somewhat greater than the cost of a steam installation of the same power rating. But the cost of operation is astoundingly cheaper and the useful life of the plant is such that the extra cost of installation is quite justified. The actual cost of production, day in and day out, may be lower than the cost with water power. And with such a plant one may utilize any convenient location. It is not necessary to remain beside a water course.

"People unfamiliar with the problems that beset the operators of power plants do not realize all about power. Indeed, it is surprising to most people to learn that the cost of keeping a water installation working is usually two thirds of the cost of steam plants. Wear and consequent loss of efficiency and power at the turbines constitute one big factor. Another is the almost constant cleaning out of races and channels—hereabout they fill up at an alarming rate. These are only two of the things which keep the cost of operation up.

"And in the case of this particular plant there is the peculiar circumstances relative to the water. These make it imperative to have ready at all times a complete steam equipment which may be turned to when the water power becomes suddenly unavailable. Under the terms of the lease of this building we are entitled to one-half the flow of the river until the water falls for any reason below the top of the dam. When that occurs we may be shut off at an an instant's notice.

"Personally, it is my opinion that assuming condemnation proceedings in the case of the quarters of the present plant seemed advisable, they should have been under way over two years ago. It is also my opinion that the cost of litigation and the cost of putting the plant in shape, if we won, would exceed a half a million dollars; and it is questionable, considering the drawbacks that go with the plant, if the place would be worth that expenditure to the borough.

"At present we are using about two hundred horsepower in manufacturing the current consumed by our lights and borough equipment, but the borough is on the verge of an inevitable increase in the number of lights installed and maintained and in a surprisingly few years four hundred horsepower will hardly serve to keep us supplied. Among other things, this would mean the installation in the near future of a complete steam plant to supplement the turbines, nearly the cost, one might say, of the erection of new quarters.

"In view of the navy's experiments and those of several Middle Western towns which are solving their lighting problems in the same way, I feel justified in advancing the plan of Diesel-driven generators, housed any place the Councilmen may see fit, as one practical solution of our difficulties. I feel, too, that the expansion of the future will justify the choice."

Fratt and Pifer Impressed

Councilman Fratt said, in an interview, that he is emphatically in favor of the town making its own current if any economical way can be found to do it. Councilman Pifer has repeatedly voiced similar views and both, from years of association with Mr. Risdon, entertain a high respect for his technical opinion. It is likely that Messrs. Fratt and Pifer will sponsor the plan, and will present, as soon as it is available, complete data on the cost of installation.

In outlining a few of the features which contribute to the high efficiency of the Diesel engine, Mr. Risdon mentions the successful compounding system, which utilizes the only partially-spent gases from the high compression or explosion cylinder to actuate a low pressure piston, as is done in the compound steam engine. In the present automobile motor these partially-spent gases are discharged into the muffler—sheer waste. Then, too, there is the total elimination of the electrical ignition system common to the familiar gasoline using motor. In the Diesel, the heat of compression—the compression is very great—is used to fire the charge. So great is the heat of normal operation that relatively complete combustion is obtained, eliminating largely the carbon deposits which tell all too plainly the tale of waste in the types with which we are familiar.

Mr. Risdon called attention to the fact that the borough owns a strip of ground along Stony Creek, below Main—the Borough Wharf—which might be used as a power plant site.

SI

150 FT. OF SWEDE ST. DAM GIVE WAY

Norristown Times Jan. 14, 18

NSTRUCTIONS AT

Thought for Time Norristown Water Service Would Be Menaced

FURTHER BREAK UNLIKELY

Company Officials Are Optimistic, But Prepared for Emergencies

As a result of the rise in the Schuylkill river, with the accompanying flow of ice and debris, about 150 feet of the dam extending from the foot of Swede street to the Bridgeport side gave away, Saturday afternoon, from the Bridgeport end, with the result that for a time the water supply service of Norristown was seriously threatened. It was feared that, with the break in the breastwork of the dam, the entire length would give way and thereby remove the water shed which has been maintained in and around the lower end of Barbadoes Island, on the Bridgeport side of which is located the big intake of the Norristown water works. Luckily, however, but one section of the dam collapsed. There is but a narrow opening for the water to rush through, and a water shed sufficient to meet the requirements of the intake is still maintained.

However, just as soon as the river recedes below its normal state, whereby no water shed could be maintained, the operation of the intake will be so seriously affected as to make it necessary to procure other means of maintaining the water supply. There is no apprehension that for a time, at least, there will be any serious menace. The main danger, of an immediate character, is the possibility of a severe drain that might arise through a large fire and the operation of the fire-fighting apparatus therewith.

The intake of the water company is located at a point about 400 feet above the Bridgeport end of the dam, on the island, facing the Bridgeport shore. It is sufficiently low to meet even ordinary emergencies, so long as there remains a pool or water shed above the line of the dam. For the first time has this shed reached a sate where the level of the water is much lower than the breast of the dam and on the verge of exposing the mouth of the intake.

Officials of the water company, together with engineers and the officers of the Schuylkill Navigation Company owners of the dam made a careful examination of the condition of the dam, and are satisfied that, if there is not further extraordinary rush of ice and debris down the stream, there will be no further break, and that the present break will not be sufficient to seriously interfere with the water supply of the town. Steps, however, will be taken, if at all possible, to relieve conditions in the vicinity of Port Indian, where a jam is reported just above Catfish dam, so as not to further threaten the Swede street dam.

The break in the dam came with a tremendous rush of ice and debris. It was not unexpected, however, as the condition of the stream, Saturday, assumed a serious menace and men were on the watch. The damage to the dam will be several thousand dollars, in view of the difficulty which will attend the repairs.

With the break, cakes of ice, shattered motor boats, great quantities of lumber and debris of every character, which had been held in restrain, rushed through the opening, and for a time the torrent was of tremendous force, carrying with it everything in its path.

Since the break, the water is below the level of dam at all points except where the break occurred. With the lowering of the water here, there also came a lowering of the canal water.

At the Norristown water works it was stated, at noon, today, that conditions, so far, are satisfactory, and that a sufficient supply of water is being obtained, but that steps had been taken towards running the plant the full 24 hours to meet all possible emergencies.

Tom Phila Record 9/12/17

An odd problem was put to the Federal inspectors of steamboats this summer for solving. The collector of customs received a letter from an old captain in Reading who operates a little excursion steamboat line that nobody outside of Reading seems to have known was in existence. The boats operated by the captain were the Carrie and the Rosa, and the captain seemed to have a fit of consciense, for he wrote that, although he had been running his boats for 49 years, he had never had them inspected or equipped as the Federal Government requires with life-saving paraphernalia. The question evidently was whether the water on which the conscientious objector was running his boats came under the jurisdiction of the Federal law. Accordingly the letter was turned over to the steamboat inspectors. The Philadelphia office promptly put the matter up to the main inspection office in New York. The New York office referred the old captain's letter to Washington, where the Department of Commerce sagely gave the decision that the Schuylkill above the dam is "an improved river," hence comes under the rivers and harbors act. Such a question had never been up before, so is a new thing for a river above a dam to be considered navigable. Inspectors saw the captain's boats and recommended the usual equipment—fire pump and hose, life preservers and boats—but the Rosa and Carrie are not running at present.

DATE.

No.

SCHUYLKILL CANAL NOW COMING BACK

Inquirer 8/4/20.

Freight Congestion Enables Old Disused Waterway to Come Into Its Own

Millions in Coal Already Pass Down It Yearly; to Be Boon to Philadelphia

Special to The Inquirer.

READING, Pa., July 31.—Transportation through the upper reaches of the Schuylkill Navigation Company's canal is assuming larger proportions. Dredging of the canal is going on at various points where accumulations of mud and other desposits have shallowed the channel. In the water yard here a fleet of barges are moored on which repair work is underway. In the canal proper long lines of barges are tied up against the banks. A new dredge is in course of construction in the water yard. Every thing indicates that a resumption of water traffic is planned and that if carried to its legitimate end there will be a return of the old days when the towpath was a hard well beaten trail and commodities of various kinds found their way from inland districts to city markets at lower rates of freight than demanded by railroads.

In reality the canal through the upper sections has never been really closed. Thousands of tons of coal have been shipped through it annually. But coal was about the only commodity that was routed over the canal. There was a reason for it. The canal had become the property of the Philadelphia and Reading Railway. So long as sufficient rolling stock was available to move freight there was no reason for shipping by barges. But freight cars just now are holding a star place among articles listed as "short." In fact they have become so scarce that it has been necessary to impose embargoes to relieve food and fuel shortages at various points. Just now the Interstate Commerce Commission has a ruling in force which gives coal shipments to the great lake ports preference over shipments to other points and the ruling is being effectively enforced. The railroads are beng compelled by the government to utilize a certain percentage of their coal cars for the lake shipments regardless of the demands of other traffic. It is a stringent order. Neither railroads nor coal operators favor it. The latter object for the reason that coal prices in the lake region are lower than at other points. They would not mind this so much if the railroads could furnish enough frieght cars to handle shipments to the higher markets. But this the railroads cannot do. For the situation but one solution is offered. The canals.

Speed No Object.

Barge transportation is slow. But slow deliveries are preferable to no deliveries. Furthermore, the experience of the government during the war in the use of inland waterways conclusively proved they could be utilized to advantage in the transportation of certain commodities. Among them was coal. No reason could be found why a large percentage of the coal coming from the Pennsylvania mines should not be shipped by canal. At least no reason was obvious except that for years there had been no real necessity for doing so. The car shortage, however, changed the situation. Now there is a reason and one which even the railroads admit will operate for several years, possibly without cessation, for industrial development is faster than railroad equipment increase can possibly be and with production outstripping shipping facilities by rail waterfreighting must be reverted to unless, and it is admitted by those familiar with conditions that at best its possibilities are limited, the motor truck train takes the place of the steam freighting system. This is highly improbable, it is pointed out, owing to the greater cost of transportation as compared with the railroad service.

Although a small canal as compared with others in operation the little water way which practically parallels the Philadelphia and Reading line has been in its time a great commercial artery and there seems no reason why it should not again become one of the most important feeders for the Port of Philadelphia. It is simply a question of operation. Naturally it will require improving. It will have to be deepened and widened; new locks throughout its entire length are necessary. The present barge fleet must be replaced by a fleet of modern canal boats.The tow path must give way to the tugboat and motorized "pluggey." But all of this is easy to accomplish. Time is the principal element involved. It cannot be done in a month. It might take two years. But once realized central and western Pennsylvania have opened them a sure and expansive traffic agency which may be depended upon for nine months in the year throughout its entire length. Furthermore, the period during which the canal is certain to be free from ice blockades is that when the heaviest shipping is being done. So far as the coal regions are concerned, it is natural that the bulk of the shipping take place during the late spring and summer months. Otherwise there would be coal shortages at terminal points during the fall and winter.

Coal Now Being Carried.

At present the canal is being extensively used for the transportation of coal from Fort Clinton to Phoenixville. Unless there is some unseen condition between Pheonixville and Philadelphia which prevents the use of the little waterway all the way to that point, there is no reason why coal barge trains should not be engaged in delivering coal at the later point. In fact while it might be impossible to ship the city's entire coal supply by canal, and at lower freight charges than by rail, an appreciable percentage of it could be delivered in that way, and this may be one of the ultimate objects in view by the company controling the canal.

Formerly the canal was connected through the Union canal, with the system of inland waterways north of here. But latter canal has been out of commission for several years. It might be reopened to advantage.

Inland water transportation has gone too far in the course of recent reconstruction to slip again into disuse. The tendency from now on will be to develop it. This follows from the hecognition of the broad principle that it is a criminal extravagance on the part of the State and the Federal Government to permit the improvements of this character made during the past century to lapse into disuse. During the period when the railroads were being developed such a policy may have been excusable. They needed every pound of freight they could carry to come through with their expansion and improvement policies and were, economically, justified in demanding it. But the initial railroad period, so far as Pennsylvania is concerned, is ancient history. In the situation there is nothing to justify throttling a competitor who for the future can be nothing but a valuable ally. This is recognized by conservative and broad-minded railroad directors and explains the change in the attitude of the railroads in general toward "canal competition."

As members of the Inland Waterway Association have discovered, a tendency is evident in railroad circles to aid rather than oppose inland waterway transportation. The reason is simple. Railroad interests have discovered there is a certain class of traffic they never handle except at a loss and that is primarily the traffic the canals bid strongest to get.

No more picturesque stretch of country exists in America than is traversed by the Schuylkill canal. Through a section of the State rich in earliest romance and later the depository of much of our national history, it winds its way, connecting here and there with the beautiful little river whose name it takes, to eventually merge itself with its traveling companion in the very heart of Philadelphia, from whence entrance into the Delaware River is short and easy.

Much of the way it travels through a valley enclosed by picturesque woodlands or flanked by vast stretches of farmlands, the most productive in the Commonwealth. It is a lazy little canal that for almost the whole period since the days of the Civil War has been working slowly on the problem of self-elimination. At places it has been quite successful in this direction, according to dredging masters who have occasion to interrupt it in its pastime. But, nevertheless, it exhibits indications of being a husky little waterway that only needs the right kind of encouragement to prove to Pennsylvania that it is about as staunch a little friend as the State ever had, for it gives promising assurances that if helped out a little it will carry its share of the State's traffic burden and do it for a nominal charge as compared with what the service is costing the people of the State at present.

Of the canal it may be said that the problem of terminal facilities solves itself. In the lower Schuylkill River, below what is known as Fairmount Park dam, where the canal passes through the last lock into the river, exists vast opportunities for a first terminal. Still further down stream, where the Schuylkill River enters the Delaware, still greater terminal facilities exist, while further in the Delaware River itself ample opportunities abound for the organization of spacious terminal conveniences such as are required for handling ocean-going traffic. In this respect the little waterway has a decided advantage over any of the canals in the East. It will cost an enormous sum to develop these terminal facilities. But once acquired they become fixed improvements, assets to the canal company requiring little upkeep expense. Would such an extended development pay?

Lapse Not Likely

Probably not if the country is to revert to pre-war conditions, industrially speaking. At least that is the opinion candidly expressed by advocates of the inland waterway development generally. At the same time the position is taken by them that there is no likelihood of such a thing happening. Every indication makes it appear certain that an enormous expansion in traffic is assured. Furthermore, with the development of the Port of Philadelphia there is sure to come a great increase in Western shipping as well as in the opposite direction. Much of this Western traffic goes into the territory tapped by the canal. It will not be a question of towing back empty barges. They will go freighted. Of course, the up-canal course is more difficult and more expensive. But that can be taken care of in arranging tariffs. Looked at in the view of future developments and things indicate a profitable business through the canal.

One advantage afforded by canals in operation comes through the establishing of the canal ports along the route. These make it possible to do not only a through business, but local carrying as well. It makes it possible for the produce of a given territory, whether farmers or manufacturers, to organize their shipping to take advantage of the cheaper water route, and while they cannot distribute their entire products over the canal routes, an appreciable amount can be shipped in that way at a freight rate that makes it certain they will be given preference in selling markets thus reached. In turn this builds up their business and they become greater shippers into territory unreached by the canal. This going round the circle has not been lost on railroad managers, who have come to recognize that dividends increase in proportion as industrial production grows, and that the long-headed economic policy for them in their own self-interests is to advance every agency—which in turn means increased production. The growing attitude of the railroader toward inland waterway development suggests that he is by no means the inveterate opponent of the barge and the towpath.

Business in Millions

Millions of dollars' worth of freight, particularly coal, is being shipped through the upper Schuylkill canal annually, it is said, while from the policy in evidence in the development of the canal through this section, a greater volume of business is expected.

How long a time will elapse before the canal is in operation throughout its entire length will depend largely on the insistence of the demand on the part of the public that it again be made a traffic route. Manufacturers, Chamber of Commerce bodies, industrial organizations throughout the territory tributary to the canal are the agents which must become active in assisting its development. Assurances must be given that sufficient traffic will be provided to insure the canal operating on a paying basis. Its coming back is less a question of coercion on the part of government and State than one involving an assurance that it will meet a necessity. Where this necessity exists through this section the canal is in operation. At present its activities are confined almost exclusively to transporting coal.

But allied as the coal industry is with other existing interests, there is no legal or moral reason why it should monopolize use of the canal. However, with the canal used exclusively for transporting coal, and used for this purpose over its entire course, it would serve a great economic end in providing cheap transportation to markets throughout its entire length.

No one familiar with the development of the inland waterways during the past ten years or with what is now being undertaken in other sections of the country in opening them up doubts that they will play an important part in traffic history of the future. Every contention put forward against their development has been successfully refuted by experience. Where proper allowances are made for the conditions surrounding the few failures attending the development, even the latter are seen spelling success. That the Schuylkill canal is destined to play a significant part in inland waterway transportation is regarded as inevitable by those familiar with its history, its surroundings and the developments taking place throughout the country surrounding it. They see it in the near future with its long strings of barges, its Philadelphia terminals, its local ports and its traffic organization performing a great economic service and aiding materially in the development and maintenance of future prosperity in Pennsylvania.

Philadelphia Record,
September 6, 1917.

* * *

Along the Schuylkill Canal between Port Clinton, the head of navigation, and Reading, are a number of barges loaded with coal, on their way to this city. Whether they will reach the locks at Fairmount before winter is a problem the officials of the Schuylkill Navigation Company or the Philadelphia & Reading Railway Company, lessees of the canal, are trying to solve. The barges are stuck in the canal and dams along the route, owing to the water being too shallow to float them. The shallowness of the stream is due not so much to the lack of water as it is to the gradual filling up of the channel by coal culm, which is washed into the river and canal in large quantities at every heavy rainfall. Ever since navigation opened in the spring it has been necessary for the company to have the large dredging machines constantly at work deepening the channel so that the loaded barges could be floated. As soon as one part would be opened up, a heavy rain would close up other parts. The gradual filling up of the river will in a few years, it is feared, prevent the running of boats on the Schuylkill. Fairmount pool, as the dam above the dambreast at Fairmount is known, and which extends to Manayunk, is also filling up. This can be seen at many points along the river, in the small islands or sandbars that crop up above the surface of the water. In places where the water used to be 20 or more feet in depth there is not depth of water sufficient to float boats drawing five feet. Peter's Island, a short distance above the Columbia bridge, is gradually being lengthened by the accumulation of cinders, sand and other debris washed down by the slow-going current from Manayunk. In some places the water is so shallow, when the water is normal, that a man could wade from one shore to the other without wetting his head.

Philadelphia Record September 28, 1917.

Dog Martyr to City's Water.

Schuylkill Haven, Pa., Sept. 27.—A dog which fell into the Schuylkill River here came home in such a filthy condition that he was killed by the owner as the only solution, yet the same water is used for domestic purposes farther down the line. The slow running waters of the Schuylkill have rarely been so filthy.

HOPE FOR CHEAPER COAL WITH MOORE FOR MAYOR

Record 8/18/19

Anthracite League Foresees Interesting Result of Electing Waterways' Friend.

SEEK CANAL COMPETITION

Railroad Promises Broken and Obstruction Asserted in Statement.

Special to "The Record."

Pottsville, Pa., Aug. 17.—The election of J. Hampton Moore as Mayor of Philadelphia might have the direct effect of lowering the price on anthracite coal in Philadelphia $1 a ton, declares the Anthracite Consumers' League, of this city, an absolutely non-partisan organization. Officials of the league believe that Moore's election as Mayor would greatly hasten the day of completion of waterways between this region and Philadelphia, which would be adequate to handle the coal traffic at much less figures than the enormous freight charges loaded onto the business at present.

Frank C. Reese, secretary of the league, has been an active worker for the rehabilitation of the waterways of the State and especially the reclaiming of the Lehigh and Schuylkill Canals. He gives Moore credit for accomplishing more for the deeper waterways of the country than any other Pennsylvania Congressman has been able to accomplish in half a century.

The cost of coal at the mines is admitted by the operators to be not more than $3.54, taking an average ton, in which the cost of the more expensive sizes has been computed. League officials declare they cannot, after two years' investigation, find what is the justification for the present high prices in Philadelphia of nearly four times this cost.

They believe the reopening of the two coal region canals, on a scale which would permit them to carry barges of 1000 tons each, would work a radical revolution in the coal trade. They point out the necessity of competition between waterways and railroads if the public is to get the benefit of the cheapest service.

Railroad Promises Broken.

"When the Schuylkill Canal was practically abandoned," declared league officials in a statement issued today, "the excuse was made that coal could be shipped on the railroads to Philadelphia at a cost of 35 cents a ton, which was cheaper than it could be handled on the canals. The public can readily appreciate how this promise has been kept. Ever since the canals have been out of competition with the railroads the cost of transportation has been steadily rising, until it is now approaching $2 a ton.

"Certain sizes of anthracite could be carried on the canals, which would obviate the shifting of cars on the railroads, which now is a factor in raising the cost of coal transportation, and, therefore, the whole problem of cost to the public would be solved to some extent.

"The feasibility of the Schuylkill & Lehigh and Schuylkill canals for heavy traffic has often been questioned, but before the best expert commissions no adequate reason has been presented why there would be obstructions in a physical way to the operation of these waterways, and this, of itself, offers the best solution to the country of reducing the present high prices of coal.

Obstruction to Be Expected.

"While the canals are idle, choked at the terminal points in this region with coal dirt, experiments have been made of taking coal to Philadelphia and Reading with motor trucks. It has been found that coal can be handled in this small way as cheap as the railroads now handle millions of tons, transportation of which should be cheap in correspondence to the amount of the traffic.

"Just at present the coal corporations, in conjunction with interlocking interests, are losing no opportunity to allow the heavy rains and floods to fill up the coal region canals as completely as possible. It may be expected that every obstruction possible will be placed in the way of putting these transportation routes back into active public service, but all must admit that the placing of such an active friend of water transportation in the chief executive's office in Philadelphia would give great encouragement and impetus to the movement.

"At present the amount of coal carried on the Schuylkill and Lehigh canals would hardly keep three furnaces in operation. We expect the renewed Senatorial investigation of the coal business to take up this feature."

SCHUYLKILL ICE JAM PUTS WATER SUPPLY IN PERIL

Continued From Page One

river bed, it was but a plaything for the river, gigantic with its fifteen feet of additional waters. Battering, splintering and lifting, the river ripped the dam to pieces and carried it downstream to jam it a half mile below in the great ice pack at the Girard avenue and Pennsylvania Railroad bridges. This was on Saturday afternoon and evening. The loss of this temporary structure was estimated at $8000, and its timbering increases the menace of the Brobdignagian ice pick it reinforces.

The heaving, groaning ice field, with its heavy bridge timbers, its logs and stumps and river flotsam extends as far as can be seen—sometimes five feet above the level of the waters; sometimes more. Apparently, the jam is from ten to fifteen feet thick and hourly increasing.

The crest of the flood has carried away nearly 200 feet of the dam near Norristown. There is a big jam at Port Indian, two miles above Norristown, which is threatening to break momentarily. Should this give way, it is feared that the balance of the Norristown dam would be swept downstream and wreck the high piers carrying the Philadelphia and Western Railway over the river. Upon the holding of the Port Indian jam might even depend the safety of the Fairmount structure, as the additional strain of more ice might surmount the intervening obstacles.

Besides entailing thousands of dollars damage to the Schuylkill Navigation Company, the flood is endangering the water supply of Norristown, as the town obtains its supply from the Bridgeport side of the river, where the break in the dam has occurred. The navigation company will have immense difficulties to repair the damage this winter owing to the difficulty of getting labor in the cold weather.

Anxious Hours For Manayunk

Manayunk is laboring under the most anxious hours in its history. The great ice cakes pouring down the river are building the ice pack nearer and nearer the bottom of the river. Should the channel become choked to the bottom, the waters will back up and flood its twelve or fifteen mills, other river industries and homes. The waters were slowly backing up last night as the river slowly declined under the shrinkage of supply by the cold snap.

The ice is frozen solid between the Fairmount dam and Girard avenue bridge and the water is passing in under it. It is believed that this barrier, against which the river has thrown up the tremendous jam, will hold during cold weather, but a warm day would weaken the ice and the herculean pack would sweep seaward, destroying the Fairmount dam and thousands of dollars' worth of property bordering the river below.

From the Fairmount dam is pumped daily approximately 135,000,000 gallons of water by the city. It is the water supply source of all of West Philadelphia and a third of the downtown section.

Holding back this invaluable water supply is a wooden crib dam, built originally in 1817 and rebuilt back in 1874. For three years the bureau of water has been pleading with the city to build a new concrete dam, forcefully presenting the danger of continuing to depend on this ancient wooden structure, but the city, engrossed with extravagance in other lines, has refused to act.

"No one can tell what is the strength of this wooden dam or how much it has deteriorated," said Chief Davis last night. "I believe that something must be done in the morning. I shall consult with Director Webster, of wharves, docks and ferries, about taking steps to relieve the menace immediately. I was never faced with such a situation and know nothing about dynamiting. It doesn't seem as tho there could be enough dynamite in the city to break up that ice. It is an event of a lifetime, such a jam.

"The ice will be more solid in the morning and better for dynamiting, I should think. We would probably commence to dynamite near the Fairmount dam and work upstream."

Webster Promises Aid

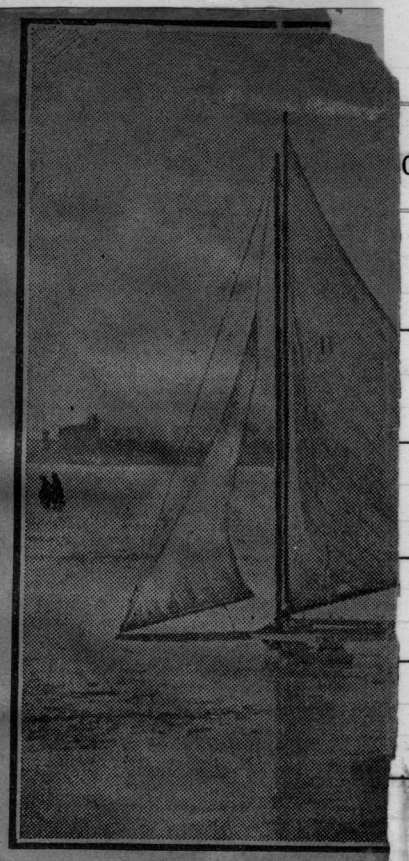
"The jam appeared to me to be assuming serious proportions when I saw it Saturday afternoon," said Director Webster. "I thought then something would have to be done. I shall be glad to co-operate with Mr. Davis if called upon, but it is his proposition, as it threatens the city water supply."

The river was slowly receding last night. Saturday noon six and a half feet of water was flowing over the Flat Rock dam. Only eighteen inches was going over late yesterday afternoon. The river, however, was still running full of immense ice floes and heavy flotsam. An immediate break of the cold spell and a resumption by the Schuylkill of its rampage is the menace facing the city, as the Schuylkill is still nearly ten feet above normal.

The flood at its crest on Saturday night crept up over the East Park drive in Fairmount Park below Strawberry Mansion and also at the Ferry road falls of the Schuylkill. The drives were roped off. Yesterday morning the waters receded to leave the roads covered with ice and refuse.

The high waters forced mills to close at Manayunk on Saturday afternoon and also compelled a shutdown of the big hydro-electric plant supplying power to the P. R. T. Cellars were flooded, both along the river and those bordering Darby and Wissahickon creeks, which were also running madly. Residents of Merion were among those with flooded cellars. Four motorboats were torn from their moorings and smashed [illegible] the Flat Rock dam.

Heavy timbers floating [illegible] Flat Rock dam were [illegible]



Riverton, N. J., has become the cen[illegible] Miss Ray Newkirk, Whitney Frishmuth, [illegible] spell has given a greater opportunity [illegible]

been torn from the new bridge at Conshohocken. The pieces were of great bulk and apparently parts of bridge work.

While hardy adventurers drove madly about on iceboats at Riverton and the upper Delaware, iceboats battled to keep the channel and the ways of ferries clear below. The strong wind made iceboating dangerous yesterday and skating almost impossible. The craft sped along at frequent speeds of easily 100 miles an hour.

Will Keep Delaware Open

John S. W. Holton, president of the Philadelphia Maritime Exchange, declared the ice conditions of the Delaware to be serious, but he is optimistic, declaring that the stream will be kept open to the ocean, even if the navy sends battleships to do it. The Delaware is not so indomitable now as in 1898, Secretary George F. Sproule, of the commission of navigation, said. He is sure the great number of steamers plying in the present war trade will keep the channel open.

"When a thaw of proportion comes," he said, "the iceboats will attack the heavy ice fields upstream, as is their custom, and gradually break away the ice so that it will float to the ocean slowly thru a cleared stream.

Charles Durborow, the bank cashier at Riverton, who takes a daily plunge in the river, found the ice too thick to break thru for the first time in years yesterday. "Sonny" Wright and Ralston Biddle, two Riverton boys, sailed an iceboat from Riverton to Torresdale in the afternoon. From six to ten craft could be seen skimming over the ice in that section.

The body of Mrs. Jennie Dillmore, of Ninetieth street and Erwig avenue, was found yesterday morning hanging over a wire fence about the home of her neighbor, Francis H. Peppelman, of Ninetieth street and Laycock avenue. She had been in the city visiting her son Charles, of 213 Fitzwater street, and it is thought she lost her way and perished in the cold. She left her son in the best of [illegible]

[illegible] Swift[illegible] [illegible]nan, of th[illegible]

Norristown Daily Times 1/20/20

It will be well, indeed, for Norristown to have representation at the meeting of the Schuylkill Canal Improvement Association, which is to be held, tomorrow, in the Hotel Berkshire, Reading. For a long time there has been an effort to revive interest in the old waterway, with the idea, of course, of making the same navigable again. Years ago the Schuylkill Canal carried a great deal of traffic from the central or near-central section of the state to tidewater at Philadelphia, and the worth to the general welfare was quite appreciable. With the impetus of the several towns (as municipalities) along its banks and the added push that will come from the interest of manufacturers and the endeavor to align it with the larger movement looking to federal waterway plans, something tangible might actually come of the matter.

DATE.

TO RESTORE SCHUYLKILL CANAL

The Telegram has, on a number of occasions, urged that Reading should take some steps toward inducing the government to restore the Schuylkill canal to navigable service. Nothing in that direction has been done here, but the matter has been taken hold of in Schuylkill county in a way that means business.

On December 8 a convention will be held at the Hotel Washington, at Washington, D. C., under the auspices of the Inland Waterways Commission, at which the subject will be brought forward. Schuylkill county will send delegates to that convention primed with facts and figures to show the importance of the canal as an inland waterway, and they propose pushing the scheme with a determination to win out.

Reading is now invited, through The Telegram, to participate in the convention, and to send delegates representing the city and its commercial bodies to co-operate with the Schuylkill delegates.

The matter is one of more than ordinary importance to the people and the industries of Reading. There was a time when vast quantities of coal were shipped by the canal to tidewater, and a large part of Reading's supply came that way The transportation charges were low and remained so until the railroad company secured control of the canal and gradually eliminated it as competitive carrier. Since then transportation rates have been whatever the railroad company saw fit to make them, and the canal has become practically non-existent. The purpose now is to restore this waterway to its former usefulness, and it can be done if the federal authorities can be convinced of its practicability.

Reading should do its share in the matter, and the first step is to have the city properly represented at the coming convention. The Chamber of Commerce, which is an organization representing the industrial and commercial interests of Reading, should have one or more of its members in the convention, and it would not be out of place for the city to be officially represented there.

Now is the time to act. Rdg. Telegram - 11/29/19

WAGE GAIN IN 3 LINES EXCEEDS PRICE JUMP

N.Am. 8/28/17

Iron, Steel and Woolen Workers Get Big Pay Increases

SHOWN BY U. S. REPORT

WASHINGTON, Aug. 27.—Iron, steel and woolen manufacturing workers' earnings per capita for the two and a half year period just ended increased more than the advance in the retail prices of foodstuffs for the three-year period July, 1914, to July, 1917.

A statement by the department of labor today shows that iron and steel workers' per capita earnings increased 53 per cent and woolen manufacturing workers' 45 per cent, while the cost of foodstuffs increased 42 per cent.

Workers in other industries did not fare so well. Per capita earnings of boot and shoe workers increased 31 per cent; cotton manufacturing employes, and cotton finishing workers 38 per cent; hosiery and underwear workers 37 per cent, and silk workers 25 per cent.

Workers in the iron and steel industry in the two and a half year period increased 75 per cent in number and the payrolls increased 167 per cent; in the boot and shoe industry, workers increased 17 per cent and payrolls 53 per cent; cotton manufacturing decreased 1 per cent and payrolls increased 37 per cent; cotton finishing workers increased 11 per cent and payrolls increased 53 per cent; woolen manufacturing workers increased 19 per cent and payrolls 73 per cent; hosiery and underwear workers increased 21 per cent and payrolls 66 per cent; silk workers increased 2 per cent and payrolls 28 per cent.

Norristown "Times" Feb. 26-'18.

EMBER OF THE TIONAL NEWS SERVICE

FIFTY FEET MORE OF DAM GIVE WAY

This Fact, With Storm-Raised River, Affects Town's Water Supply

OFFICIALS ARE EXERCISED

Consequences Not Determinable Yet; Great Plunging at Barrier

Nearly fifty feet more of the Swede street dam was swept away, yesterday afternoon, and this, together with the high water that arrived during the night, has affected conditions regarding the borough's water supply.

It will be remembered that over a month ago a large portion of the dam, near the Bridgeport side, was swept away, and although workmen have been attempting to make repairs they have been unsuccessful, because of the general conditions of the river. Yesterday afternoon's break started about where the first had stopped and continued in the direction of the Norristown side.

Officials of the Norristown Water Company were considerably exercised over the condition, last evening, and lines were immediately erected for the purpose of making preparations to complete soundings of the stream near the big intakes of the supply mains. This would have been done this morning, but the heavy rains of the night caused a rise in the river of about three feet and new lines will now have to be erectel. The borough's water supply is pumped from the river, near the Bridgeport side, through two mains, one a 16-inch and the other a 24-inch.

Superintendent Robert Jackson of the water company, said, this morning, that water was still being pumped into the reservoir, and that the work would continue just as long as was possible He was unable to say at that time whether the new break would cause a decrease in the supply, but ventured the statement that care would have to be used for several days until the full extent of consequences could be determined.

Many spectators visited the dam this morning, but they could see little of the break on this side of the river. The high water is plunging over the breast on the Norristown side in great volume, while on the Bridgeport side the lengthy break allows the water to pour down stream with such velocity, that it will be impossible to do anything toward repairs for several days at least.

The river had raised considerably by 2 o'clock this afternoon, and it was announced by rivermen, that the water was at that time within fifteen inches of the height it reached last week, when the ice was swept away.

It is still rising was the report received at that time, and the indications were that before nightfall the river would be more than ten feet above normal.

The managers at the Woodstock Mills, which will be the first to suffer any damage because of the high water are this afternoon taking every precaution to prevent damage to the plant and machinery. Other establishments along the river front realizing that there is a big freshet are taking similar action.

This afternoon the water was rushing over the Swede street dam on the Norristown side with such velocity, that the breast was not noticeable. Many persons were attracted to the river front.

$35,000,000 URGED IN NEW WATER PLAN

Necessary for Immediate Improvements, Experts Report to Mayor

Public Ledger 9/22/20

WOULD EXTEND METERS USE

To Meet Requirements Fifty Years Hence Would Cost $134,900,000

Improvements to the water works system of the city necessary to meet immediate requirements would entail an estimated expenditure of $35,000,000. Development of the water supply to an extent adequate to needs fifty years hence would involve an outlay fixed at $134,900,000.

Those are the conclusions of the commission of four engineers appointed by Mayor Moore last July to study the water problem of the city, which are contained in its preliminary report to the Mayor. The report was transmitted by the Mayor yesterday to Council, which referred it to the committee on public works. The report was signed by all four members of the commission. J. W. Ledoux, chairman; George W. Fuller, Joseph F. Hasskarl and J. Waldo Smith.

Commission's Recommendations

The general conclusions and recommendations of the commission covering both present and future necessities are:

Continuance for a time of the existing sources of supply at local points on the Delaware and Schuylkill rivers.

Extensive improvements and additions to the present works at once in order to insure an ample quantity of water at a reasonable pressure and of satisfactory quality throughout the entire city.

The extension of the meter system as rapidly as feasible to curtail waste, conserve supply and capacity, reduce investment and operating costs and divide water rates more equitably.

The construction of reservoirs on the watershed of Perkiomen creek to supplement the supply drawn from the Schuylkill particularly during the dry weather flow of the river.

Abandonment of the Schuylkill subsequently upon the construction of storage reservoirs on watersheds of Perkiomen and Tohickon creeks, from which water should be brought to the existing Schuylkill river plants, as improved and extended.

Construction of storage reservoirs on the Neshaminy creek, into which water from the Delaware above Trenton should be pumped, and from which the water would flow by gravity to the Torresdale filters, as improved and extended. That step is to follow any increase of the pollution of the Delaware at Torresdale that will render the water at that point undesirable for use.

Relinquishment of consideration at present of a water supply from distant sources, such as the tributaries of the Lehigh river, and the upper Delaware near Water Gap, or the Susquehanna river above the Maryland state line, because of prohibitive cost.

The filing with the State Water Commission of a caveat of intention to develop reservoirs outside of Philadelphia in order to avoid the necessity of purchasing property far in advance of actual construction.

Regarding ground water or artesian well sources in South Philadelphia, to the possibility of which the Mayor particularly directed the attention of the engineers in delivering his instructions to them last July, the commission states in its report that water from those sources has thus far appeared to be of small quantity and highly impregnated with mineral matter, which makes it unsuitable for domestic or industrial purposes. The report adds, however:

"Contracts for test wells are about to be let and final conclusions and recommendations need not be made until additional information and data have thus been obtained. Should adequate and satisfactory water bearing strata be found in the lower part of the city, a supply could be developed as a separate unit which could be readily connected with the distribution system when and as desired."

Program for Expenditures

The opinion is expressed in the report that the improvements and extensions deemed necessary for present requirements should be made in the next five or six years. A program for the expenditure of the $35,000,000 estimated as required for those improvements and extensions is recommended as follows:

For the construction of the first impounding reservoir on the Perkiomen creek, with necessary development of program for stored water supply, $8,000,000.

For improvements in and extensions to the Delaware river supply works, $6,000,000.

For improvements in and extensions to the Schuylkill river supply works, $4,000,000.

For extension of distribution mains and construction of distributing reservoir for the northeast portion of the city, $8,000,000.

For extensions and betterments to existing distribution reservoirs and main pipe lines, $5,000,000.

For general improvements essential for safe maintenance of the plant, $4,000,000.

The report urges that the city promptly begin the executions of those projects.

The estimate of $134,900,000 for the completion of a water-supply system to meet requirements fifty years hence is based on present costs of materials and labor. It is therefore pointed out that so great a sum may not be necessary. The amount is apportioned as follows: Construction of reservoirs and headworks, $56,073,000; construction of aqueducts to carry water to the city, $50,819,000; changes in filtration plants and pipe distribution system, $28,000,000.

The recommendations for developments for the half-century period are predicated on an estimated increase of the population of the city to 3,250,000 in that time.

The report gives a brief summary of the defects in the existing waterworks system, enumerating those at the various plants. The replacing of the Fairmount dam by a modern structure of masonry is recommended.

In reference to the quality of the water supply, the report says that the unfiltered water of the Delaware and Schuylkill rivers is now and for many years has been seriously polluted. It adds, however, that in appearance the city water supply leaves nothing to be desired.

Supply From Mountain Sources

Concerning a supply from mountain surces the report says:

"Water from the the distant mountains always appeals to the sentiment of the general public who think of it as crystal clear, as they have seen it in the bubbling hillside brooks on their excursions afield—cool, refreshing and satisfying. This is seldom, if ever so, and in the present case it is a highly idealized sentiment and far from the facts, although the countain sources have many points of excellence, and they are admittedly superior to the supply recommended when both are considered in an untreated condition.

"The upper Lehigh and its branches and the Delaware river tributaries above the Water Gap could furnish a very soft, generally clear and hygienically safe water, which would, however, at times be turbid, have a high color or vegetable stain, and would be subject to occasional dangerous pollution. To make it as satisfactory as the water which Philadelphia now is using would require treatment to remove the color, turbidity and disease germs. We go so far as to express the opinion that with rare exceptions no surface water should be consumed without filrtation or other treatment.

"The cost of a water supply of a given quantity is roughly proportionate to the distance between source and point of use, other things being equal. Therefore, for economical and business reasons, a city should seek successively, as it outgrows its supply, the available source nearest at hand and reduce to a minimum the abandonment of its existing useful plant. Cities rarely discard on a wholesale basis their existing water supply facilities, but from time to time reach out and make additions to their supplies."

NEW BRIDGE WORK TO START AT ONCE

12/10-1919

Bingaman St. Contract Given to Harrisburg Firm For $699,860

Whitaker and Diehl, contractors of Harrisburg, whose bid of $699,869 was low, were awarded the contract Monday by the County Commissioners for the erection of the new Bingaman street bridge. They agree to complete it within 400 working days. Several carloads of material and paraphernalia are now enroute to this city, and work will be started the latter part of this week.

The following bids were received: Whitaker & Diehl, Harrisburg, $695,860, 400 working days; T. L. Eyre, Philadelphia, $704,225, 475 days; Walsh Construction Co., Syracuse, N. Y., $717,540, 500 days; Farris Engineer Co., Pittsburgh, $721,214, 525 days.

Built Before in Berks

The successful bidders have constructed many bridges throughout the county during the past five years, among the larger structures being the Poplar Neck bridge, Monocacy bridge and the Leesport bridge, and their work has proven most satisfactory.

The commissioners have not yet made any provision for the county's share towards the payment of the new bridge, and this will be determined after the hearing before the Public Service Commission next Monday at Harrisburg, when the share of the Pennsylvania and P. and R. railroads also will be determined.

Division of the Cost

According to the agreement entered into by the city and county, the former will pay 22 per cent and the latter 78 per cent of the cost of the bridge, and whatever sum the railroads will be called upon to pay as their share will be deucted on a fifty-fifty basis by both.

Until the public service commission make their ruling in this matter next Monday, the commissioners will make no provision for funds towards the county's share, and this will be about the first important matter the incoming commissioners will be called upon to do.

5 RRS. AGREE TO CUT COAL FREIGHT RATES; ENDS 4 YEARS' FIGHT

North American — 5/1/1917

Compromise to Cause $2,000,000 Annual Saving Here

TWO MEN WIN LONG BATTLE FOR JUSTICE

Service Board Will Favor Move, Is Certainty; Meets Saturday

VICTORY FOR PEOPLE

Many Suits Have Marked Price War; Company Books Are Gone Over

Settlement of the hard coal freight rate case, with a direct and immediate saving to Philadelphians of nearly $2,000,000 a year, has been made thru a compromise agreement.

All five railroads involved have approved the principal terms in the compromise, which, roughly speaking, cuts in half the order of the Pennsylvania public service commission filed in December of 1914, reducing the freight rates on anthracite to this city. If no serious objection is made—and none is expected—the commission will give formal approval to the agreement at a public hearing to be called within a week.

A meeting of all parties concerned in the four-year fight to reduce excessive coal rates to Philadelphia will be held next Saturday morning in the office of Michael J. Ryan, a member of the public service commission, in the Land Title Building.

The meeting was called by Trinkle two or three days ago. Efforts to reach him last night were unsuccessful.

All members of the commission will attend this meeting. Others present will be Ward W. Pierson and Harold S. Shertz, the traffic attorneys who fought the case for the complainants; Attorney General Francis Shunk Brown, William N. Trinkle, Jr., his special assistant in the case; Charles Heebner, chief counsel for the Philadelphia and Reading Railway Company, and George Stuart Patterson, chief counsel for the Pennsylvania Railroad Company.

Other Roads Concerned

Other defendant roads party to the compromise which probably will be represented at the conference are the Central Railroad of New Jersey, the Delaware, Lackawanna and Western and the Lehigh Valley.

Tentative approval of the compromise already has been given, it was learned yesterday at Harrisburg, by Attorney General Brown. Since early last December he has been co-operating with Pierson and Shertz in their efforts to push the case to final hearing before the Dauphin county courts.

It also has been learned that several members of the public service commission had been "sounded" on the compromise, and that they are ready to indorse it. Some minor details remaining to be cleared up will be settled at the conference Saturday morning, and the commission then will announce a date for a public hearing. After it has approved the compromise and has issued a new order on the railroads reducing hard coal freight rates to this city, in accordance with the agreement, the first order will be rescinded and the appeal now before the Dauphin county court will be withdrawn by joint action of the attorney general, Pierson and Shertz and the railroads.

Until details are settled at the conference Saturday, it will be impossible to state accurately just when the new rates will go into effect; but the probabilities are that, barring a hitch, Philadelphia will start to profit by the compromise within thirty or forty days.

Victory Over Railroads

In the opinion of experts on public utility litigation, the settlement will be the greatest victory over a railroad or a group of roads ever achieved in this country. It was pointed out yesterday, in corroboration of this assertion, that this is the first case in which the railroads have really lost revenue.

Government suits without number, many of them based on the facts brought out by Pierson and Shertz in fighting this case before the public service commission and the old state railroad commission, have been decided way that the railroads called unfavorable to them. But in no case involving such a large amount of money has a railroad lost on one commodity or classification without receiving compensation in another.

Accepting the estimates of the railroads as accurate, the annual revenue loss by the compromise will be at least a million and a half a year. This estimate was made about two years ago. Since that time the tonnage of hard coal from the three big Pennsylvania fields transported to this city by the five railroads involved has increased tremendously, so that the actual loss is doubtless even higher.

Tho complete details of the agreement are not as yet available, it is known that the complainants insisted upon a reduction of not less than 25 cents per ton on prepared sizes of coal. This sum has been established by custom as the unit in the retail sale of anthracite in Philadelphia and elsewhere. It is said that the railroads wanted to make the reduction 20 cents, but Pierson and Shertz held out for 25 cents, on the ground that any sum less than the unit might be absorbed by the retail dealers, thus preventing the small consumer from getting the saving, for which the whole fight had been made.

Two Months of Conferences

The conferences leading to the agreement were started two months ago, after Attorney General Brown, at the request of Pierson and Shertz, took action to end the delay which had held up the case for two years. Brown appointed Trinkle as special counsel, and the latter, with Berne H. Evans, attorney for the public service commission, filed before the Dauphin county courts the long-delayed answer of the commission to the appeal of the railroads.

Immediately thereafter negotiations looking toward a compromise were started, presumably by the railroads. Previous efforts of this kind had been rejected by Pierson and Shertz and the complainants, among them Harrison S. Morris. But after consultation with all parties concerned, and with at least the tacit approval of the attorney general, it was decided to reopen the negotiations and see what could be done.

One reason for this decision was the fact that orders by the public service commission are made for a period of three years. The order in the present case was to have become effective on January 1, 1915, and therefore would expire on January 1, 1918. It was pointed out that in view of the long delays already incurred, it would hardly be possible to push the case thru the courts to final decision in the one year the order had to run.

At that time the answer of the commission to the appeal of the railroads had not been filed and no date for argument had been set by the Dauphin county courts on either the question of jurisdiction or the appeal itself. If the case had gone along in the ordinary way the railroads could have had recourse by appeal to the state supreme court, in event of an adverse decision by the Dauphin county courts.

U. S. MAY AID CANAL BOOM

SCHUYLKILL ON LIST IN A NEW FEDERAL BILL

CONGRESS ASKED TO GIVE 100 MILLIONS A YEAR FOR FIVE YEARS TO REOPEN COAL AND OTHER CANALS.

Nov 18/19
Reading Eagle

The Reading Chamber of Commerce and businessmen generally are interested in the inland waterways convention at Washington on Monday, Dec. 8. They may be represented there because of the prospect of the old Schuylkill Canal being reconstructed as a coal and other freight carrying medium, with government backing for the project. This plan has been included in a bill to provide a large federal appropriation for the rennovation of canals and important streets that could be used for carrying freight if deepened and kept clean.

The meeting in Washington on Dec. 8 will be preceded by a session at the Washington Hotel of the Mississippi to Atlantic internal waterways committee, called by Chairman W. H. Stevenson and Secretary Burd S. Patterson. The purpose of the convention is to consider the House of Representatives' bill providing an appropriation of $100,000,000 a year for five years to construct, acquire and improve a nation-wide system of waterways within that period. The work suggested must have the approval of United States engineers.

Includes Schuylkill Canal.

State Auditor General Charles A. Snyder, of Schuylkill county, will be one of the leading speakers at the convention from Pennsylvania.

The bill to be considered was introduced in the lower House of Congress on June 28 last by Congressman G. E. Campbell, of Pittsburgh. Among its provisions is an appropriation of $13,000,000 for Atlantic intercoastal canals, under which would likely come the reconstruction and reopening of the Schuylkill canal, if that project is given serious consideration after the bill becomes a law.

The main purpose of the convention is to unite all waterways organizations of the country in support of the Campbell bill. Senator Joseph E. Ransdell is one of the speakers, and there will also be addresses by the presidents of the various waterways organizations. There are many businessmen in the Schuylkill Valley who are strongly of the opinion that the reopening of the Schuylkill canal would prove a profitable venture and afford a means of transportation for reaching communities which are not now touched by railroad lines. The coming convention will afford such an opportunity to push their project, and if there is teamwork among all cities and boroughs in the Schuylkill Valley something tangible in the way of reopening the canal may be the outcome.

Port Clinton the Terminus.

Burd Patterson, Pittsburgh lawyer, historian and newspaper writer, was in Pottsville for the past several days consulting with citizens, and it is believed by some that the reopening of the canal now is only a matter of a short time.

The coal companies have flooded the canal with culm so systematically for a number of years past that now the few boats which are loaded come no nearer to this region than Port Clinton, which is 15 miles below the coal belt. It is entirely practical to reopen the canal again to the coal region and make transportation cheap and efficient.

The plans for the reopening of the Schuylkill Canal, along with other inland waterways, has the indorsement of the state Chamber of Commerce, of Mayor-elect J. Hampton Moore, of Philadelphia; Gov. Sproul, Auditor General Snyder, Frank C. Reese, of the Anthracite Consumers' League, and other prominent citizens.

It is believed the results in the Schuylkill Valley of the opening of the Schuylkill Canal to public traffic again would be as gratifying as in the Pittsburgh district, where the government spent seven million dollars on the Lake Erie and Pittsburgh canal systems. The result was that during the war, when transportation facilities were blocked, and the railroads unable to handle the public business, the canals carried 25,000,000 tons of coal at a saving of $10,000,000, as compared with rail rates, and 6,000,000 tons of other material at a saving of $4,000,000, or a total of $14,000,000, which was twice the amount spent by the government in the enterprise. This coal kept Pittsburgh's great industries going during the war and helped them to turn out their share of the 60 per cent. of the nation's war munitions furnished by Pennsylvania.

Could Supply Large Cities.

The scarcity of coal during the winter months in Philadelphia and New York, due to the inability of the railroads to carry sufficient fuel, would undoubtedly be obviated if the Schuylkill Canal is reopened and rejuvenated.

Frank C. Reese, of the Anthracite Consumers' League, says the opening of the canal furnishes the best practical scheme for the lowering of the price of anthracite in Philadelphia without affecting the wages of miners.

DATE. TER OF.

PROGRAM FOR CANAL BOOMERS

CONVENTION IN READING WEDNESDAY JAN. 21

Rdg. Eagle — 1/19/20.

The program for the Schuylkill Canal Improvement Association convention at the Hotel Berkshire on Wednesday, Jan. 21, has been completed. There will be morning and afternoon sessions and a dinner at 6. Plans for enlisting state and federal aid in the project are to be considered. The program follows:

MORNING SESSION.

10 A. M.—Opening session. Registration of delegates and extending acquaintances to one another.

10:30 A. M.—Meeting called to order by J. H. Zerbey, of Pottsville, president of the association, and introductory remarks, presenting to the convention the respective officers of the association.

10:35 A. M.—Prayer by Rev. (Name to be announced later).

10:40 A. M.—Announcement of guests at the convention and reading roll of all delegates present.

10:45 A. M.—Address by President Zerbey, detailing purpose of the association.

11 A. M.—Address, "Welcome to Reading," by Mayor John K. Stauffer.

11:15 A. M.—Address, "History of the Schuylkill Canal," by J. W. H. Glass, first vice president and chairman of executive board.

11:30 A. M.—Greetings by E. A. Barkley, of Phoenixville, second vice president.

11:45 A. M.—Address, "Co-operation With Other Sections of Pennsylvania to Hasten Legislative Action," by Burd S. Patterson, secretary of Lake Erie and Ohio River Canal board, of Pennsylvania.

12:15 P. M.—Suggestions of delegates for general policy to be pursued by association.

12:30 P. M.—Appointment of committees to meet during luncheon recess.

12:45 P. M.—Luncheon.

AFTERNOON PROGRAM.

3 P. M.—Business meeting. "Welcome," by local business and civic organizations; reports of committees; address by James H. Craig, deputy secretary of internal affairs of Pennsylvania; address, by George M. Lehman, engineer, Department of Internal Affairs of Pennsylvania; address, by city solicitor of Pottsville; nomination and election of officers; adoption of program for work of the association to advance the project; automobile tour of the city.

6 P. M.—Dinner. (Toastmaster to be announced later). Open forum. "How Improvement of Shipping Facilities for Heavy Tonnage by Canal Will Benefit All Business Interests in Cities and Towns of Schuylkill Valley, by Relieving Traffic Congestion and Helping Reduce Costs of Living."

The officers of the association are: J. H. Zerbey, Pottsville, president; J. W. H. Glass, Reading, first vice president; E. A. Barkley, Phoenixville, second vice president; W. L. Binder, Pottstown, secretary; D. Elmer Dampman, Reading, treasurer of convention.

State Senator T. L. Eyre spoke briefly, and promised every assistance he could give, called on. He thought the opening of the canal would help reduce the cost of living, and assured the Association that nothing worth obtaining was ever won without fighting for it, every inch of the way.

John B. Dengler spoke briefly, and the next speaker introduced was Jas. C. Craig, Deputy Secretary of Internal Affairs, who continued and emphasized the remarks of those who preceded him, and promised whatever aid his Department might be able to give.

Prof. Lehman, of the Department of Internal Affairs showed a blueprint of the canal from Port Carbon to Fairmount Dam, Philadelphia and explained the different levels, lock systems, and so on.

Gilbert Fox, Esq. of Norristown, advised a getting down to hard work at once and advised that the solicitors in the different towns get together and map out a plan of legal procedure.

Joseph Fitzwater a 90 year old visitor from Port Providence, was called on and gave a number of interesting reminiscenses, speaking in a serio-comic vein of some of his experiences, from the time when, as a boy, he pulled up the stakes which the Reading Railway Co. used to mark its proposed line through the meadow of his father's farm and used them to club chestnut trees, until he tried some of the river washings as fertilizer on his farm, with the result that crops in that particular section were rather poor that year, the "fertilizer," instead of being the rich black mud of former years, proving to be culm from the mines, having no value at all and proving, rather, to be a detriment.

The last scheduled speaker of the afternoon, was former District Attorney Truman D. Wade, who began by telling how he played marbles on the canal tow path at his home town when a boy, and saw watermellons taken up the canal and coal brought down. He suggested a legal staff to take up questions of procedure and also urged a direct appeal to the public Service Commission." You may talk and you will gain nothing, but go direct to the Commission and get results."

Brief talks were given by William S. Ellis tax collector of this place; Councilman Richard F. Bate of Conshohocken, and President Zerby, the latter complimenting Messrs. E. A. Barkley and M. J. C. Smoyer on the excellent program prepared. On motion of Mr. Glass, a vote of thanks was extended the Borough of Phoenixville, and the session adjourned.

The evening meeting was given up to an informal talk on different subjects ranging from the canal to daylight saving.

Out-of-town men who registered and whose names do not appear in the above report were James B. Ray, burgess of Conshohockn; Frank Quigg, of Port Kennedy; John B. Dengler, a member of Council in Pottsville; H. R. Black of the Business Men's Association, Royersford, and Charles Connard, of Port Providence.

THE SCHUYLKILL CANAL HEARING

(See below)

Planned by William Penn.

Mr. Glass. I am here in behalf of the Schuylkill Canal Improvement Association to further the bill presented by Congressman Watson.

We are deeply interested in the Schuylkill canal for many reasons. In the first place the Schuylkill canal, we know, is the first completed waterway project in the country and had been contemplated by the far-sighted William Penn over 130 years before it was completed. We feel that the Schuylkill canal would be of great importance to the government in time of war as well as in time of peace. We feel that if the canal was modernized we could transport coal by means of it from the heart of the coal regions to tidewater, in Philadelphia. So we feel that its importance there should interest the government. In peace times we all realize that coal is the most essential commodity in the furtherance of industry and also in aiding toward reducing the high cost of living.

Mr. Layton. For the information of the committee will you allow me to ask you to put into the record of the hearing just exactly where this canal runs and the length of it?

Mr. Glass. The Schuylkill canal once ran from Pottsville to tidewater. It has been running from Port Clinton, and there is a possibility of extending it into Pottsville, which takes it right into the coal regions and connecting with tidewater. The Schuylkill canal empties into the Schuylkill River at Manayunk, and below the dams, of course, the stream is navigable.

As I said it is important during peace times. We could transport this coal and aid our industries. We have had the experience in the past that some of the industries in the valley, and particularly in Reading, the city that I come from, had to close down for want of coal. With this canal a condition of that kind would be eliminated.

Mr. Lea. What would be the length of that canal?

Mr. Glass. The distance is approximately 100 to 108 miles.

7,000,000-Ton Capacity.

Mr. Lea. What size canal do you want?

Mr. Glass. The size of the canal, to modernize it, should be approximately 70 to 75 feet wide. We feel that a modern canal could be made, and if the locks were 20 feet wide the capacity of the locks would then be a little less than 500 tons. With an 80-foot width surface during the canal season we could transport coal, approximately 3,600,000 tons, with single locks and double that amount, or over 7,000,000 tons, with double locks.

That, we feel, would be a fair volume of coal to be transported on the small expense that would be necessary to modernize the canal; on these grounds, feeling that it would be of great importance, as I have said before, in case of emergency and in peace times, we ask your committee to consider the merits of the Watson bill and extend a survey. I might mention that a survey has been made by Engineer George M. Lehman, Department of Internal Affairs, at the request of the government, and I understand that that report was favorable.

...have come here, having previously come here to a convention, on my own time and at my own expense. So we are merely arguing from the point of civic pride and for the good of the community.

Mr. Dempsey. I don't think the committee is clear as to whether the federal government has any jurisdiction over the pollution of that stream or not. It has jurisdiction, as I understand it, over the boundary streams and probably over navigable waters that are in the state. Possibly it has over this river.

Mr. Glass. Well, as that question has been brought up, they have merely a lease. This was chartered to the Schuylkill Navigation Co. on March 8, 1815. The state of Pennsylvania, in its initial waterway operations, issued a charter to the Schuylkill Navigation Co., and it operated up until 1870 and was a profitable affair, as is shown by the fact that the shares, which originally sold at $50, increased to $175 and $180 in 20 years of operation. At that time it was a competitive line to the railroad company and for that reason it was taken over. Now the railroad company is not living up to the terms of the lease.

Lease Not Observed.

Mr. Dempsey. In what respect?

Mr. Glass. For instance, Phoenixville has contracted with the Reading Railway Co. for a certain volume of coal to be transported from the mines over the canal for the purpose of furnishing their necessities in the city. They had transported part of that contract amount and before the contract was completed they were notified that the canal was abandoned and necessarily they had to get the balance of the coal over the rails, which would mean extra expense and inconvenience to the city of Phoenixville. Now, we have an official communication showing that they are abandoning the canal and the terms of the lease were that they should continue operation of the canal; and furthermore by permitting this culm to get into the canal, which is against the terms of the lease, and creating a menace to health, I feel that it is a further instance of the violation of the terms of the lease.

Mr. Layton. Why did you not proceed to cancel it?

Mr. Glass. The reason is this: That people that I have spoken to

No Salaried Jobs.

Mr. Glass. At the present time our position is that if the canal could be utilized so that it could transport coal, iron ore, and heavier tonnage, the railroads would be in a position to transport the other commodities that will sustain life, such as food, clothing, etc., and it would help to relieve the congestion. The Schuylkill Canal Improvement Association, as a word of explanation, has been formed by men who are actuated by motives of civic pride. There is no remuneration of any kind in connection with it, no salary; all the officials are volunteers; the members have volunteered their time, and I might add that I individually felt that it was a task and expense to appear before the public service commission of Pennsylvania, and I don't think there was any individual who felt inclined to spend the time and the money. In other words, probably they were not public spirited enough to go to that expense. The association was formed for that purpose, to protect the rights of the communities and of the citizens, and we felt that with an organization of this kind we could enlist the services of public-spirited men, and in a recent convention held at Phoenixville we decided and are now endeavoring to get the city solicitors from Reading to Philadelphia, including Pottsville and Philadelphia, to co-operate with our association, and several have already consented to do so.

State Might Help.

Mr. Cleary. Suppose this was done, how could you compel the coal companies, which are the railroads, to ship coal over the canal? They own the coal and they own the roads.

Mr. Glass. If we could not compel the railroad companies to transport the coal, if they live up to the terms of their charter to keep it open, I think the state would enlist aid to have the coal transported, because we feel that it is a necessity. From an economic standpoint I think it has its merits also.

Canal Water Unwholesome.

Mr. Glass. If you will permit me to add a few remarks, the city of Philadelphia, I am informed, contemplates getting 100,000,000 gallons of water from the Schuylkill River. The Schuylkill canal empties into the Schuylkill River. At the present time a good many of the municipalities and communities along the Schuylkill valley are getting their drinking water from the Schuylkill canal. In the present state it is a menace to health. The culm going into the canal from the mines makes it a menace to health, and recenily in Philadelphia, three or four—I think four states had a waterways convention. A councilman from Reading, Mr. Dampman, who has charge of the water department in Reading, attended the convention and brought back the report to me that Philadelphia was going to appropriate $15,000,000 for its water supply and contemplated getting 100,000,000 gallons of water from the Schuylkill.

Furthermore, the purpose of the Schuylkill Canal Improvement Association is not to fight the railroad companies. It is not to stifle competition or to offer any opposition to them. We feel at the present time, transportation being of vital importance to the entire country, that the canal would be of great aid. In other words, we are willing to aid the railroad companies in their transportation problems.

Mr. Dempsey. Your position is that there is congestion and that there will be plenty of business for both the railroads and the canals?

(See above)

...IATION

9549

READING MAN ARGUES FOR RESTORED WATERWAY

5/16/20

A Reading man was the central figure at one of the numerous congressional committee hearings and inquiries that always make up part of the Congress year at Washington, when J. H. W. Glass, vice president and executive board chairman of the Schuylkill Canal Improvement Association, was heard. His subject was advocacy of a bill providing for a survey of the canal from Pottsville to Philadelphia via Reading, with a view to the eventual rebuilding of the canal, widening of the waterway and the use of boats of larger capacity.

Advance proofs of the Congressional Record with the statements by Mr. Glass and the text of the questions put to him, have been received here. The Reading man expects to take up the canal question with state officials at Harrisburg, either as an assemblyman or as a private individual. Mr. Glass is one of the Republican aspirants to place in the House at Harrisburg, but he says he will go to Harrisburg to boost the canal regardless of the results at the polls.

Part of the Congressional Record of the canal hearing is reproduced below:

1.

a. b. c.

DATE. No. of. CA (RUCTIONS AT

TWO GO OVER FLAT ROCK DAM; 1 DEAD

July 1919

Boat, Carried by Swollen River, Carries Man to Death—One Swims to Safety

BODY NOT RECOVERED

One man is reported to have been drowned and another narrowly escaped death when their rowboat was carried over Flat Rock dam in the lower Schuylkill river this afternoon.

The missing man, who is believed to have lost his life, is Samuel Shubin, twenty-four years old, of 1630 South Fourth street.

He recently returned from overseas where he served as a lieutenant in the army.

His companion, who escaped by swimming to the Montgomery county shore, is Harry Brown, twenty-two years old, of Fourth and Federal streets.

Both men had been camping at Lafayette, about two miles above the dam.

They left the camp this morning and started to row down the river. When they approached the dam, they were caught in the swiftly moving current and the boat carried over the comb.

Just as the boat started to go over the dam, Shubin shouted to his companion to jump into the water. This Brown refrained from doing. Shubin jumped and has not been seen since. Both were in bathing suits.

Brown sat in the boat and was carried over the dam. As the boat struck the rocks it broke in two. Brown managed to swim to the west shore of the river where several men who had witnessed the affair aided him to climb the bank.

The Montgomery county authorities and the Manayunk police, who are cooperating in the case, hold out little hope that the missing man is alive.

It was explained that the water is too high in the river to permit to drag for the body.

The water pouring over Flat Rock Dam is five feet deep. This is four feet above normal, a condition caused by the continued rains of the past eleven days.

Chief Engineer Culp, at the Shawmont pumping station, saw the boat approaching the dam and called a warning to the two occupants who were evidently not acquainted with the river. According to Brown neither he nor his companion heard this warning. It is considered probably that the cries from the pumping station was not heard because of the roar of the water rushing over the dam.

The body of an unidentified man was recovered from the Schuylkill river at Forty-ninth street today. The man was 5 feet 8 inches tall, and weighed about 150 pounds. A timecard was found in the pocket of his clothes, bearing the name of Tony Millet. The card was made out by a Pittsburgh concern, Braun & Knox. The body was removed to the Morgue.

Schuylkill Fouled for Entire Length by 750,000 Tons Discharged Annually Into River

Inquirer 1/5/19

Commission Suggested to Advise Legislation Cure Evil by Economic Engineering Methods

Once a week a fresh red, white and blue flag is flung to the coal-blackened breeze from the top of the Bell Telephone Building in Philadelphia. At the end of each week of exposure the red, white and blue colors are turned a uniform black, and a fresh flag is run aloft to undergo, in a few days, the same merging into blackness.

The pollution of the air in Philadelphia has an accompanying pollution of the rivers of the State with the outpourings from the anthracite mines and coal breakers. The waters of the Schuylkill, the Susquehanna and the Lehigh, which men not yet old remember as running sweet and clear, fit to drink from and bathe in, are now as black and foul as the week-old flag on top of the Bell Telephone Building. This is true of the Schuylkill for practically its entire length. The islands and banks, once covered with vegetation, have now the appearance of low-lying culm banks. The black deposits increase yearly in extent and from the bed of the stream new islands, with a basis of coal mine wastage, are steadily extending.

Formerly, perhaps, no great harm was done by the outpouring of the mine waters into the rivers. The region formerly affected was confined in the main to the mining country itself, which often was not an agricultural country. The volume of mine and coal breaker outpourings was not great enough to affect seriously the water supply of the distant cities. The practice was once of natural development, though even for that now distant period it was lacking in forethought and thrift. It was the method of disposal most easily arrived at, and custom gave it authorization. Its origin belonged to the time of the reckless destruction of the forests, of the fowls of the air, of the game in the woods and of the fishes in the waters.

All these destructive processes have been wisely checked, at first in spite of some opposition, but now with the approval of every intelligent person, except in the anthracite regions, where the wastage of water and coal still continues.

In recent times, mechanical and chemical methods have been perfected, economical in installation and operation, by which it is entirely practical to effect a great saving in coal and water, and to prevent any longer the pollution of the rivers of Pennsylvania, suffered for so many years in the anthracite regions. The saving in coal becomes of increased importance yearly. This was never so apparent as at the present time. In the faec of the obvious need for economy, nearly 4,000,000 tons of fine granular coal, which by proper methods could be saved for domestic uses, are carried each year into the rivers. With the present high prices of coal it has become a pressing question whether the anthracite supply should not be saved entirely for domestic uses. In the Eastern part of the country nearly all domestic heating plants are constructed for the use of anthracite and are unfitted for the consumption of bituminous coal. At present thirty per cent. of the anthracite production is used for steam fuel. This thirty per cent., composed of the small sizes of coal, can be briquetted for domestic fuel, and the fine coal now wasted, if recovered and briquetted, would cause an increase of at least eight per cent. in the tonnage available for domestic consumption.

The river pollution is entirely confined to the river systems of the Susquehanna, Schuylkill and Lehigh. About 85 per cent. of the total pollution occurs in the Susquehanna River system; the Schuylkill comes next with 10 per cent., the Lehigh having only 5 per cent. The main tributaries of the Susquehanna, so far as pollution is concerned, are the Lackawanna, with pollution covering an extent of 30 miles; then the Susquehanna itself, from Pittston to Shickshinny, an extent of about 22 miles; Nescopeck Creek at its headwaters, amounting to about 8 miles; Shamokin Creek at its headwaters for 15 miles, and the Mahanoy Creek for 20 miles.

The pollution of the Schuylkill occurs at its headwaters, where it breaks up into a number of small creeks, which are polluted for a distance of approximately 40 miles, measuring along these various creeks.

The pollution of the Lehigh River occurs at the headwaters of a number of its small branches rising in the territory in the vicinity of Hazelton.

The pollution of the Lackawanna River is serious, as it passes through a thickly settled valley which contains many industries in addition to anthracite production. The same is true, to a lesser extent, of the Shamokin Creek, while the Nescopeck and Mahanoy Creeks pass through a region which is mainly devoted to the anthracite industry, although the waste they carry may have some comparatively slight effect on farm lands.

So far as pollution of the Susquehanna River itself is concerned, the large volume of water coming down from New York State very much dilutes the pollution, which does not interfere seriously with the quality of the water for industrial purposes. The volume of clean water also destroys very largely any bad effects on vegetation due to acid mine waters.

The large quantity of solids delivered to the Susquehanna from the coal mines, together with the natural washings from the Susquehanna watershed, works serious injury from the fact that they are deposited along the lower regions of the Susquehanna on any low-lying lands that may be over-flowed. In one way the coal solids delivered to the Susquehanna are a benefit to a limited class of people along the middle and lower Susquehanna River, in that a fairly profitable business has grown up in the recovery of the coarser coal from the river in the vicinity of Harrisburg, which gives that vicinity several hundred thousand tons a year of comparatively cheap steam fuel. But this recovery of waste is economically unsound.

The pollution of these rivers comes from two causes, acid mine waters and solids carried by the waste water of breakers and washed down from culm piles. According to the report of the mine inspectors of Pennsylvania for the year 1916, there was pumped from anthracite mines something like 600,000 gallons per minute of mine waters. Much of this water is of fairly good quality and could not be considered as causing pollution. Considerable of it, however, carries free sulphuric acid and sulphate of iron and aluminum, which are acid in their effect and are destructive of vegetation. It is probably true, however, that within fifteen or twenty miles from the point of pollution the effect of such acid has been completely destroyed, owing to natural chemical reaction. The solids carried into the river systems with the waste waters from breakers are the most serious form of pollution. During the average working day of eight hours, and for approximately 250 days per year, there have been something like 300,000 gallons of these waste waters from the breakers discharged into the river systems. The solid content amounts to from 5 to 10 per cent., which means a total of between six and seven million tons of solids per annum, or something like ten million cubic yards of solid material.

Attempts are usually made to store as much of the solids as possible on the surface, but in many cases the breaker waters are discharged directly into the streams, and even where retention of the solids is attempted the actual retention is not by any means complete. It is probable that the solid material washed by rains from culm already deposited counter-balance any material which may be retained by such impounding attempts. Until recently the material which has been discharged from the breakers has been considered absolutely worthless because of its comparatively small size and the presence of large amounts of fire clay. The greater portion of these solids are smaller than barley, the smallest commercial coal size made, but it is probable that there is a loss of nearly 500,000 tons a year of barley size and larger.

The serious fuel shortage occasioned during the past two or three years has stimulated interest in this waste material and has resulted in the development of a number of crude plants to recover the coarser portion of the coal found in these river systems. During the past year the recovery has amounted to several hundred thousand tons. Such recovery, however, has not amounted to more than 10 per cent. of the recovery that is possible.

POLLUTION KILLING FRESH WATER FISH

Angling Made Impossible in Schuylkill and Delaware Rivers by Industrial Plants

MAY INCREASE PENALTY

MANY fishermen in every State in the Union are wondering how much longer it will be before the progress of science and industry will kill off all the fish in our great rivers by pollution

Reports from all over the country state that the conditions of rivers is daily becoming worse.

Manufacturing wastes, oil and culm deposits are all playing their part in driving the fish away from the streams.

Reports state that it would be useless to preserve New York harbor as a fishing ground, as the fish there are already killed, but matters take on a different aspect in the Chesapeake Bay, where the fishing industry is flourishing.

Henry W. Stelwagon, a prominent member of the Pennsylvania State Fish and Game Preserve Association, says the Schuylkill is beyond redemption as a home for fish.

"There are some people in Philadelphia," he asserts, "who can still remember when the river was populated by bass, shad and catfish. There are only probably a dozen bass caught there in a year now."

The pollution of the Schuylkill began with the operation of the coal mines, when the sulphuric acid of the mines was flowed into the river in vast quantities. It destroyed all fish life from there to the vicinity of Reading. Below the Fairmount dam, Philadelphia first not only ran all the the sewage from West Philadelphia into the river, and from part of the city east, but the gas tar refuse from the old gas works as well.

Live fish placed in bags and hauled from Spring Garden st. bridge to the dam would be dead within a few hundred yards.

The Delaware has become so bad that the shad fisheries at Gloucester are out of business. The numerous manufacturing plants at Trenton pour all their refuse into the river.

A Government report of a few months ago stated that the lower Schuylkill is the worst oil-polluted river on the Atlantic seaboard. The tons of grease and oils, various chemicals, acids and other poisonous substances that are discharged into it annually from the city sewers have destroyed untold thousands of fish fry, as well as the minute creatures upon which they subsist. Vegetation provided by nature for these also suffers.

The Federal Department of Fisheries has made some effort to stop the pollution by industries, but the act under which it operates, though stringent and well expressed, leaves loopholes by which the hands of the Department are tied. In many cases the penalty for dumping refuse is so small for one offense that the average manufacturer can pay it easily.

An effort is to be made at the present session of the State legislature to strengthen the fisheries act, forbidding industrial pollution, to raise the penalty from $100 to $1,000, and to increase the penalty for each successive offense.

d.

The solid material discharged into the Susquehanna River systems annually is estimated to amount to 5,800,000 tons or about 8,000,000 cubic yards.

The Schuylkill receives approximately 750,000 tons or over 1,000,000 cubic yards annually, while the Lehigh River system receives annually approximately 300,000 tons or nearly 500,000 cubic yards.

The following table presents carefully made estimates of the amount of coal wasted each year in the breaker water now flowing into the river systems draining the entire anthracite region. The variation between breakers is very large, but an average relation between tonnage and wastage has been established with care and applied throughout. While tests at different collieries might show variations from the company totals as presented below, the total is closely indicative of the situation.

Number of collieries operating in the anthracite region and an estimate of the annual amount of material wasted with the breaker water:

Company	No. of Breakers	Gross tons Valuable Tonnage of Material	Gross tons Valueless Tonnage of Material
Phila. & Reading Coal & Iron Co.	39	585,000	468,000
Delaware, Lackawanna & Western R. R. Co.	27	386,000	388,000
Lehigh Valley Coal Co.	34	445,000	356,000
Penna. Coal Co. & Hillside Coal & Iron Co.	15	336,000	269,000
Delaware & Hudson Coal Co.	23	400,000	321,000
Lehigh & Wilkes-Barre Coal Co.	14	234,000	188,000
Lehigh Coal & Navigation Co.	10	228,000	183,000
Scranton Coal Company	11	116,000	93,000
Independent Coal Companies	136	1,082,000	866,000
	309	3,812,000	3,132,000
DISTRIBUTION OF THE ABOVE AS TO RIVER SYSTEM			
Susquehanna River System	260	3,221,000	2,658,000
Schuylkill River System	37	426,000	342,000
Lehigh River System	12	165,000	132,000
	309	3,812,000	3,132,000

The towns and cities drawing their water supply from the rivers thus polluted have an important economic interest in the conditions described. As is well known, Philadelphia maintains an expensive filtration plant for the treatment of the Schuylkill supply, and the fouler the substance the more expensive is the filtrative operating cost. While the percentage of total solids emptied from the breakers into the Schuylkill is slight as compared with the amount emptied into the Susquehanna, the effect upon the waters of the smaller river is much more noticeable.

The pollution begins at the sources of the Schuylkill. There is no abundant clean water supply coming further from the north to neutralize the Schuylkill pollution, as is the case with the Susquehanna. In the Schuylkill the solids lodge in the numerous dams until swept onward by the periodic freshets, which process has now extended the pollution of the Schuylkill throughout practically its entire length.

Before looking elsewhere for another water supply it would seem to be the part of wisdom in Philadelphia to see if all the interests concerned, mining companies, independent operators, the other towns along the river and the State authorities cannot arrive at a method indicated by forethought and thrift by which the present wastage of water and coal at the mines and the pollution of the rivers may be stopped.

f.

So far as the fine coal now lost is concerned, the briquettes produced therefrom could be sold at the price of pea coal, at a profit of 50 cents per ton to the coal companies, or whoever should operate the briquetting plants. The approximate investment cost of plants to convert this four million tons of fine coal into briquettes is ten million dollars.

The second stage in the prevention of pollution is to take the waste waters from the fine coal recovery plant, which carries material of the fineness of flour, and consisting largely of fire clay, and discharge them to mechanically operated settling tanks. These settling tanks will deliver two products, practically clear water which can be re-used for washing coal if so desirable discharged into the streams without causing pollution, and a thick sludge containing 90 per cent. of the solids which can be conveniently stored on the surface in such a way that pollution of the streams because of the washing of the waters would be cut to a minimum.

The investment cost to treat these waters and prevent pollution would amount to approximately three million dollars, for the entire anthracite region. The annual operating cost would amount to about $400,000.

In many cases the coal companies could write off this operating cost because of the saving in pumping costs occasioned by their present water supply. In many cases they are now pumping clear water against considerable heads and from fairly long distances, which is an expensive operation.

That this clarification of the waste waters from the coal recovery plants is possible and practical is demonstrated by the fact that several of the large copper companies operating in the Rocky Mountain region are carrying on exactly the same operations. One of the largest of these companies is treating between five and six million gallons per twenty-four hours of mill tailings, which contains from three to four thousand tons of solids per day. Their object in treating these mill tailings is to put the solids in a condition where they can be piled on the surface, thus preventing pollution of the streams.

The facts and conditions herewith conservatively stated are presented in the belief that it is important and possible for the Commonwealth and the mine operators, by intelligent consideration of the subject, and animated by a desire to safeguard both the water and the anthracite coal suppply, both for the present and the future, to adopt the conservation method already indicated, a method whose economy and practicality have been demonstrated in other parts of the country in mining operations.

e.

It would be perhaps arbitrary for the Legislature and State authorities to serve notice on the coal companies that the pollution long practised must summarily stop. In former times, when vested rights and long exercisel authority made large corporations more or less indifferent to the general welfare, such a method possibly would have been the only way to bring about the much desired result. It is not well, however, for the public to be as arbitrary in the exercise of power as corporations were long thought to be, and under the changed conditions of recent times such exercise of power is not necessary. An intelligent commission to gather the facts and bring all the interests into harmony and to recommend such legislation as will cover the situation should perhaps be the first step. But this situation has become so serious that action should not be delayed.

The methods of treatment to prevent pollution are:

First, mine waters. When mine waters carry sufficient free acid or acid sulphates to destroy plant life, a simple treatment with lime or powdered limestone will completely destroy this acid action and prevent injury to plant life.

The cost of such treatment will not exceed 1½ per cent. per thousand gallons treated. It is impossible to give any estimate of the investment required, as no data is at hand as to the quantity of such waters to be treated. This process is actually in operation at the mines of a large corporation situated on the headwaters of the Ohio River near Pittsburgh. Threatened litigation with the city of Pittsburgh forced the company to so treat their waters, and it happened that because of the large quantity of iron sulphate carried by these waters, a process of treatment could be worked out, using finely ground limestone as a neutralizing agent, which yielded a valuable by-product, thus rendering the treatment a source of profit rather than expense.

Second—Treatment of breaker waste waters to prevent pollution would consist of two steps.

From these waters would first be removed the granular coal which is suitable under certain conditions as a steam coal and is the logical raw material for the briquetting industry, to produce an additional source of domestic fuel. If the coal recovered in this way were briquetted, four million tons annually could be recovered. As a raw material for the briquetting industry, this fine coal is worth at least 50c per ton. Thus the gross annual value would be two million dollars.

The total cost of the recovery plants by a process of straining and settling, for the anthracite region would be about three million dollars. At 50 cents a ton for the product the profit to the coal companies should be 15 cents a ton.

In other words, such recovery would pay for the plant within three or four years. In order to make such recovery financially attractive, development of the market for briquettes as a domestic fuel in the United States is necessary. Such development is gradually taking place and with a well thoughtout scheme on conservation, the development of the briquetting industry could be materially hastened.

PLEASED THAT ROADS MUST PAY

Rdg Eagle 2/13/20

PART OF EXPENSE OF THE BINGAMAN STREET BRIDGE

City and county officials concerned in the erection of the Bingaman street bridge declared that they are much gratified at the decision reached by the state public service commission in naming $75,000 as the amount which the Pennsylvania and Reading Railway companies will have to pay toward the construction of the new bridge.

Attorneys of all parties concerned, Wellington M. Bertolet, for the city, and Adam B. Rieser, for the county of Berks, presented their case to the commission early last January. The decision was handed down on Thursday.

It provides that the Pennsylvania Railway Co. is to pay $50,000 of the amount and the Reading Co. $25,000. In the case of the former the money is to be paid in instalments of $12,500, and the Reading shall make payments of $6,250. Half of the money is to be paid to the city and the other half to the county.

The case was argued for the city by Mr. Bertolet, and he was assisted in the preparation of it by Mr. Rieser. Except to say that he is "much gratified," Mr. Bertolet did not discuss the case.

A CONFERENCE.

Next Monday afternoon members of City Council will meet with the county commissioners to discuss the matter of constructing a spur or "ramp" to the bridge so that there will be an approach on South Third street. Citizens in this district have agitated the matter and it has been considered by the city planning commission. After the officials have discussed the proposed addition thoroughly they expect to call a general conference for the purpose of hearing the citizens advocating the erection of the ramp.

Councilman Dampman declared that the addition could be placed to the bridge at any time as easily as an addition can be made to a house. "This plan was considered when the bridge was first talked of," said Mr. Dampman, "but these people have waited until this time to present the case."

ORDERED TO VACATE.

The county commissioners have sent notice to the property owners and tenants in the houses in the vicinity of the new Bingaman street bridge to vacate the premises by March 1. This action is taken by an order issued by the public service commission. The contractors are ready to proceed with the work. There are 18 properties on Bingaman street that must be removed under the plans for the new bridge.

COAL DIRT IN RIVER CHANNEL

Reading Eagle - 7/25

MAY CAUSE DAMAGE DURING SPRING FRESHETS

Culm, consisting mostly of pulverized coal dirt, has filled up the channel of the Schuylkill River to such an extent, within the city limits, from the various colliery operations in the anthracite regions in Schuylkill county that it is feared that enormous property damage will result during the thaws and consequent freshets next spring.

So alarming is this condition that Mayor Filbert notified Thomas J. Lynch, member and secretary of the water supply commission of Pennsylvania, at Harrisburg, and received a prompt reply. Mr. Lynch states that a representative of the commission will come to Reading within a few days to interview the mayor on the subject, make a survey of the condition of the river bed and channel, after which the commission upon his report will determine what steps shall be taken to rectify the matter.

The Schuylkill slowly, but surely, has been robbed of its natural beauty and navigable advantages by the culm washed down stream from Schuylkill county. The river from source to mouth, from Pottsville to tidewater, has been permanently marred. However, it is believed that if the cause is abolished in time the river can again be restored nearly to its original condition.

Restricts Navigation.

The filling up of the channel and the midstream section of the stream cause the water to shoal, restricts navigation to a very narrow channel kept open only by dredging and when the spring floods come, aggravates the rise from the fact that the river bed is so shallow that the stream spreads out over considerable area on both sides, causing great damage.

It is hoped that the effort of the mayor to precipitate an investigation by the water supply commission will result in an end that has been heartily desired by the thousands of Reading folk who have witnessed with ever-growing consternation the marring of the Schuylkill. Recent proposed legislation in Washington has included the Schuylkill among the inland waterways to be improved for navigation. If Reading and other cities located along the banks of the historic Schuylkill are ever to realize the benefit of federal improvement of the navigation facilities of the river, a correction of the present abuses is regarded as the best possible move to bring it about.

The Letter.

The mayor's letter to Mr. Lynch follows:

"The channel of the Schuylkill River, within the city limits, has been filling up with culm, presumably from the various colliery operations in Schuylkill county, to such an extent that the condition has become alarming.

"I desire to call your attention to this matter with the hope the commission will cause an immediate investigation in order that the existing plight be modified and the cause stopped, for I am sure the usual spring thaws and freshets willl result in enormous damage due to this artificial use."

Kalback's Lock #30 Elev 365.06

CARGO. CONSIGNMENT.

DATE PORT OF INSTRUCTIONS AT

OLD BOATMAN "SAILED" CANAL WHEN 1,550 BOATS PLIED ITS PLACID WATERS

The protests of a landlord that he must have more rent means nothing in the life of Capt. Samuel W. Duffert, erstwhile navigator and farmer, who resides with his family, as he calls it, composed of himself and his dog Bruno in his little cabin on the canal boat, The Item, now in winter quarters at Waterloo, one mile north of Hamburg, on the Schuylkill canal.

In the shadows of one of the highest points in the Blue Mountain in Berks, snugly nestled among eight old, being one of a large family. When he was 19 he "shipped" on a canal boat. For 10 years he followed this occupation and when he married, he engaged in farming in the vicinity of Pottsville. Later he was in the transfer business and when his wife died he returned to the old life and asserts that the little cabin on The Item will be his home until he dies.

Mr. Duffert bemoans the fact that the canal is not used to a greater degree for the hauling of freight, just as it was when he made his first trip to Philadelphia from Schuylkill Haven. At that time, ac-

Capt. Samuel W. Duffert at the Tiller of His Boat. To His Left Is His Faithful Dog, Bruno.

other large canal freighters, lies The Item. When the boating season is over, the boats are steered into the eddy and after the water is drawn, they are high and dry on the bottom of the cove. With the culm-filled bottom of the canal on the one side and the bleak mountains on the other, the outlook during the winter is none too pleasant for this aged boatman, but he is happy and leads a contented life.

Capt. Duffert has been leading a boatman's life for many years, but he was a farmer for some time when he thought he had tired of the hard life of a canal "sailor." The longing for the old life was too strong and he again "shipped" with the Schuylkill Navigation Co., 10 years ago. Since the canal has been closed the major portion of the way from Port Clinton to Philadelphia, the only boating done is between the former place and Hamburg, the boats conveying the washery coal to the latter place.

First "Shipped" at 19.

Born in Drehrsville, Schuylkill county, July 2, 1856, Mr. Duffert, after attending the schools of the district, was employed on a farm. He was compelled to earn his clothing from the time he was eight years

cording to the aged boatman, one canal freighter took as many as 13 trips to Philadelphia in one season. The boat he was employed upon at that time went as far as Troy, N. Y., Wilmington and Chester. He had many narrow escapes on these trips and a number of times was thrown overboard by the tow line while going through the locks. How he escaped drowning he is unable to say, for he says he swims like "an iron wedge."

The boats usually carried 200 tons of coal to the sea coast and for that service the owner of the barge received 50 cents a ton. The company would furnish the three mules and the coal was loaded on the boat and unloaded at its destination. The duty of the skipper was to see that the boat reached the point to which the coal was billed. When a trip was taken to New York the price per ton was usually 60 to 70 cents a ton. Last season when he hauled the washery coal from Port Clinton to Hamburg he received 37 cents a ton under the same conditions.

1,550 Boats in Those Early Days.

When Mr. Duffert started boating there were 1,550 boats on the canal and last season there were but 30. It was eight years ago that he made his last trip to Philadelphia, the lower section of the canal being closed after that, due to the culm washed into the channel.

Coal was not the only freight hauled on the boats in the first days of the canal. Large cargoes of grain and merchandise were hauled down the canal to points south of Phoenixville. On the return trip the boats were loaded with the products of the mills located along the water front. Several times during the season a load of watermelons was purchased in Philadelphia at the rate of four cents each. These were disposed of en route to the coal regions to lock tenders and others for from 15 to 20 cents each. Boating at that time proved a profitable business, but during the long winter months the mules had to be fed and the employees on the boat received their monthly pay.

The trip from Schuylkill Haven to Philadelphia required five days and on the return, when the boat was not as heavily laden, it required but three days. In early spring a great deal of time was usually lost due to high water. During one of these freshets Mr. Duffert had a narrow escape in Felix's dam, near Tuckerton. The river was high and the boat was making straight for the breast of the dam. Careful steering

View at Waterloo Showing the Canal Boats "Parked" in the Cove, the Quarters Since the Canal Was Drawn Off.

by Mr. Duffert finally headed the boat into the locks.

Does His Own Cooking.

Capt. Duffert does his own cooking on a stove in his cabin and on a Monday morning any one passing along the state highway near the "parking" space of the canal boats can see his week's wash hanging on the line at the stern. He sleeps in a bunk at one side of his compartment. His sleep is untroubled for at his side lies his faithful dog Bruno, and directly overhead hangs his trusty muzzle-loader which has been his protection from his first trip on the canal. He is living a simple life with no cares to burden the years still ahead of him.

CANAL BOOMERS TO MEET HERE

Rdg. Eagle 11/20/20.

WANT STATE AND FEDERAL AID FOR WATERWAY

Canal Convention Program

10:00 A. M.—Opening session.
3:00 P. M.—Business session.
6:00 P. M.—Dinner and open forum.

At the Schuylkill Canal Improvement Association meeting, at the Berkshire Hotel on Wednesday, Mayor John K. Stauffer will deliver the address of welcome at the opening session.

Rev. Scott R. Wagner will offer prayer, and Jere H. Barr, first vice president of the Chamber of Commerce; Ernest J. Poole, president of the Manufacturers' Association of Berks county; W. U. Barr, president of the Rotary Club, and Rev. H. Y. Stoner, president of the Kiwan' Club,' will deliver messages of greetings at the business session.

JACOB W. H. GLASS.

The mayor and Council, with various other city officials, will attend the canal convention in a body.

In order to take part in the meeting of the association, Council will hold a brief session Wednesday morning and will then adjourn to the convention at the Hotel Berkshire.

J. W. Glass, chairman of the executive board and first vice president of the association, has been assured by city officials of their interest in the project.

COUNCILMAN ACTIVE.

Councilman D. Elmer Dampman, treasurer of the convention, will have his clerk to assist him at the convention. "The city of Reading should show a keen interest in this movement, and I propose to perform my duties as treasurer of the convention in an efficient and creditable way and help make the convention a success," was the statement made by Councilman Dampman.

The Chamber of Commerce, Rotary Club, Kiwanis Club and Manufacturers' Association of Berks County will be represented by delegates.

STATE TO BE REPRESENTED.

Mr. Glass received a telegram from Secretary of Internal Affairs James F. Woodward, saying that he cannot come himself, but that Messrs. Craig and Lehman, engineers, will be at the convention.

Judge Moyer, of Schuylkill county, sent word that he will be at the convention all day. "I hope the canal will be reopened so that coal may be shipped direct by canal from Pottsville to Boston."

DATE. | No. of. | CARGO. CHARACTER OF.

TO SAVE CITY FROM FLOODS

Rdg Eagle 3/19/19

ENGINEERS STUDY CULM AND COAL DIRT MENACE

George S. Beal, an engineer of the state water supply commission, called on Mayor Filbert at City Hall. He was sent here by Thomas J. Lynch, secretary of the commission, following a request by the mayor that the state body take some action to relieve conditions in the Schuylkill River at Reading.

The stream is becoming so shallow from deposits of culm and coal dirt washed down stream from the coal region that it is feared property will be seriously endangered during the flood period following spring thaws.

Mayor Filbert explained the situation to Engineer Beal and introduced the latter to City Engineer Ulrich. The two engineers spent the afternoon following the course of the river from a point above Flusheim, the northern city limit, to a point below the river fronting property of the Reading Iron Co., south of Jackson Lock, below the southern city boundary. Engineer Beal may stay here several days.

That other agencies in Reading have taken cognizance of the rapid filling up and the marring of the historic Schuylkill by culm and coal dirt was evidenced in a report received by City Council from the city planning commission.

It requested permission for the Schuylkill Navigation Co. to use as a dumping ground for dirt dredged from the river bed along the stretch of the stream in the "second level" north of Flusheim. The city owns a five-acre plot at Leisz Bridge. William H. Luden promises to pay the expense of hauling the dirt from the dredge to the city plot.

Stauffer and Ruth Agree.

A separate communication from Supt. Nissley, of the Schuylkill Navigation Co., together with Mr. Luden's offer, was attached to the report.

After the report was received Councilman Stauffer declared that he is in sympathy with the efforts of the organizations and individuals to improve the conditions of the river bed, but objected to use of the city plot as dumping grounds. He said that it would result only in temporary relief.

High water next spring would wash the culm dumped on the river bank on the city plot, he said, back into the stream, and the purpose of the effort would be defeated. Councilman Ruth agreed with him. The report will be given further consideration in conference.

ONLY 33 BOATS ON THE CANAL

Rdg Eagle 12/20/19

TEN OF THEM WINTERING IN SPRUCE STREET BASIN

Icebound in the Spruce street basin of the Schuylkill Navigation Co. are 10 of the 33 canal boats that are still in service, representing the pitiful remnant of the once proud fleet of more than a hundred coal carriers that brought their cargoes of anthracite to Reading and all the way to tidewater.

There was no sign of life about the boats. Not even a watchman could be found by the shivering reporter as he plodded through the snow that covered the frozen surface of the basin. Climbing up the side of the first boat by grasping an overhanging chain, the reporter gained the white-mantled deck.

Negotiating the rather perilous trip from bow to stern, along the port side of the listed deck, the reporter with his gloved hand and lying prone scraped the concealing snow from the stern plate. Mayor Chase was the name that he read.

This he recognized as one of the oldest boats in the service of the company, a boat that has made hundreds of round trips from Port Clinton to Philadelphia and that has carried thousands of tons of coal.

Continuing his examination by visiting in turn the nine other boats, he found that they are the Ranger, Dove, Unity, Gaiety, John Henry, John Henderson, Walters, Surf and Bruce.

New Steam Dredge.

Operations had been started on the construction of a new steam dredge for use next spring and summer to deepen the culm-filled channel at places along the canal and river route from above Hamburg to points below Reading. Work was halted by the zero weather and the snow.

The reporter was informed at the drydock of Captain John Hiester, at the foot of Sixth street, that work will be pushed by the navigation company on this dredge throughout the winter, whenever the weather is favorable, so that it will be completed in time for service early in April. The navigation company has only two serviceable dredges at present and the new steam dredge will be a valuable addition.

At Hendricks' coal yard at the foot of Bingaman street, the reporter learned that only 33 canal boats remain in the navigation company's fleet.

Boats Deserted.

He had been surprised to find the boats in the Spruce street basis deserted. Visits to this basin in previous winters had found some of the boats occupied by the captains and their families. He had rather expected to see smoke pouring from the stove stacks that protrude from the upper cabin decks. But every boat was untenanted, cold, bleak and inhospitable.

There is only one captain remaining in the employ of the Schuylkill Navigation Co. He is Capt. Jim Duffert, who has been with the company many years. He is the sole survivor of the hardy group of men who piloted the boats that carried the heavy coal cargoes from the loading docks at Port Clinton to points en route along the river, including Hamburg, Leesport, Reading, Birdsboro, Pottstown, Phoenixville, Norristown and Philadelphia.

Some Boats to Baltimore.

Many of these boats took the inland water trip to Baltimore and Washington, from Philadelphia. Capt. Duffert was one of the pioneers. He now represents a calling that has fallen into evil days.

Railroad competition and the indifference of officials have relegated the Schuylkill canal from its once important position, to a water route of little consequence. There is again hope that it will be restored to full usefulness. Efforts are being made by a newly formed association to interest the federal government to appropriate a huge sum for the purpose of again placing the Schuylkill canal in the ranks of important inland waterways.

Capt. Duffert is living on board his boat which is wintering in the basin at Hamburg. There are two other boats there. Capt. Duffert is living alone in his cabin. Previous winters found the cabins of all these boats tenanted by their captains and in many cases the captains' families.

Where They Are.

There are 10 boats at Reading, three at Hamburg, eight in Peacock's Dam, six miles north of Reading, and the 12 remaining boats of the fleet of 33 are moored in the six-mile canal level, which starts at the Big Dam (Klapperthal) and ends at Birdsboro.

All of these boats are icebound, uncared for, practically neglected and will so remain until next spring. All but one—the boat on which Captain Duffert is living.

Although there are 33 boats remaining, the Schuylkill Navigation Co. has only 12 mules. These mules are quartered for the winter in the company stables at Leesport. Four of these animals have been in service for more than a dozen years.

As they munch their oats during the long winter months and as the snow drifts through chinks in their stalls, if they are reminiscent and philosophical, who can picture their thoughts? They played an important part in the heyday of Schuylkill navigation. They were in service when the heavily laden boats passed hourly through all the lock chambers between the anthracite fields and Philadelphia. And they remain in the service, to witness the day when the passage of a boat in the canal through Reading is quite an event.

Up to three years ago, although the service had fallen off materially, the round trip from Reading to Port Clinton was negotiated in three days. A coal dealer in Reading could then send an empty boat from this city on a Monday morning and it would return here on a Wednesday evening, filled with a precious cargo of 170 tons of coal.

Last summer the few boats that made the passage between Reading and Port Clinton required three weeks to negotiate the round trip. This made the cost prohibitive. Culm-filled channels, which caused the heavy tows to foul the bottom, requiring hours to effect a clearance, was responsible for this excessive tardiness.

This condition made it impossible for the navigation company to get men who were willing to handle the boats. The captain and crews are paid at so much a trip, or on a tonnage basis. Slow trips means small money.

The result has been that Capt. Duffert is the only remaining river man who has not deserted the company for a more remunerative job "on land."

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DATE. No. of. CHARACTER OF.

RUCTIONS AT

VETERAN ON CANAL SIGHS FOR OLD DAYS

Captain Winfield S. Giles, 39 Years on Job, Recalls Busy Scenes on Manayunk Waterway

NOT IN BED FOR 25 YEARS

He has outlived fourteen bosses, kept the same job thirty-nine years, is afraid of nothing on earth, and doesn't believe in sleep.

That's Captain Winfield S. Giles, seventy years old, and canal inspector for the Schuylkill Navigation Company at Shawmont, above Manayunk. The canal celebrated its one hundredth anniversary Tuesday.

There's nothing languid about Captain Giles, although he hasn't slept in a bed for twenty-five years. "Cat naps" are his only offering to Morpheus. It's his boast that he's on the job nineteen hours a day.

A team of oxen pulled the first canal boat through in 1820. Giles took his first job on the canal in 1861, when he was ten years old.

His father was a lock tender at the Little Reading Dam, two miles below Reading. Men were scarce on account of the war, so the boy went to work, and has been at it ever since. Always he has worked along the canal, with the exception of three years on a tugboat, when he "shipped" as a deck hand and raised himself to a captain.

The Captain wears the badge of a special officer on his shirt and a sea captain's cap.

His ruddy, smile-lined face, weather-beaten with a half century's sun, wind and rain, shows no sign of weariness. It reflects the quiet and cleanliness of the lock-house at Flat Rock Dam, where he spends most of his time. Half of the house is in Philadelphia county and half in Montgomery county.

The office which takes up part of it contains a bed, which is ten years old, but has never been slept in.

"When the Boss gave it to me," Giles explained, "he said, 'Winfield, I want you to get at least six hours' sleep out of the twenty-four,' but I haven't had time to do it yet. I guess if I ever do lie down that long it'll be to die," he added.

Evening Bulletin 7/8/20

CAPTAIN WINFIELD S. GILES
For thirty-nine years inspector on the Manayunk Canal which observed its 100th Anniversary Tuesday.

He is subject to call day and night, having charge of the inspection, repair and control of the canal from Tidewater to Norristown.

"Life on the canal isn't what it used to be in the good old days when there were transportation stations all along and when 1,400 boats carrying coal, lime and stone, and hundreds of passengers plied along it," he said.

"The crowds were rough, the life was rough, and your life wasn't worth a nickel if you couldn't handle a gun as quickly as the other fellow.

"But, nowadays, the most excitement I get is telling the fellers and girls that come up in canoes to put on more clothes.

"It's perfectly scand'lous the few clothes they think they can get away with. There was one girl came up this week. She is one of them there things you calls an aristocrat. I know her; she lives in Germantown, and has been coming up the canal for the last five years.

"Every year she puts on less clothes, and that day I just got mad. She had on one of those one-piece things, most awfully scanty and close-fitting, and I just said to her, 'Miss, have you any clothes in that boat?' and she said, 'Yes,' so I told her to put them on or else I'd lock their boat in.

"You see the gosh-dingest carryings-on along this canal! Girls come along in canoes all painted up like some of Dan Harris' clowns, with a patch of white on their noses, one on their chin, and a couple of spots of red on each cheek.

"When I scold them they say 'Giles, you're getting old,' and I tell them I may be getting old, but I'm mighty active."

Giles has four sons and one daughter, and is grandfather of eleven children.

The canal's water supplies motive power for Manayunk mills and the hydro-electric plant at the foot of Dupont st.

THE BENCH-MARK AND SEA LEVEL

JOYFUL summer riders in automobiles, seeing more of their country in a day than some of their ancestors saw in a lifetime, occasionally find themselves, in the hilly States, breasting the diamond-clear air on the high curves of a commanding eminence which overlooks many square miles of the surrounding regions, and forms an impression of "the kingdoms of this world" that will linger, an unfading picture, in the memory.

And if such persons pause under the shade of a clump of far-seen, sky-aspiring elms, and clamber to the tip-top of the hill, they may come upon an official-looking, marked and lettered stone, which the inhabitants thereabouts will tell them, with an air of mingled pride and respect, is a "government bench mark."

A bench-mark is one of the most convincing tokens of scientific civilization. Whatever world possesses bench-marks has visual evidence to show that it is inhabited, or has been inhabited, by creatures of a high order of imagination, for a bench-mark is a symbol of planet measurement in three dimensions. It is a proof that, by mental operation, the level of the ocean has been extended under the land and across the continents, and that hills and mountains hundreds of thousands of miles from the nearest shore have been stood upon it as upon a floor, and their relative elevations measured with mathematical accuracy.

* * *

In a word, a bench-mark tells how high the spot where it stands is, not above its immediate surroundings, but above the common base of the terrestrial living world—i. e., the surface of the all-encompassing sea. "Surface" here refers to the mean level of the sea, and not to its level at either high or low tide.

The placing of bench-marks must be one of the most fascinating occupations that men have found for utilizing their time on the earth. It is the work of engineers, and an engineer is an adventurer in the completest sense of the word.

He is pioneer, traveller, pathfinder, explorer, wayfarer, mountaineer, seeing everything, doing everything, prepared for everything, an athlete in body and mind, an adept in observation and in calculation, using the astronomer's stars, the surveyor's chains and staves, the climber's ropes, the farmer's spade, the miner's pick, the mariner's compass, the cook's pot and pan, the hunter's rifle, the fisherman's lure, the boatman's oars, the woodman's axe, besides possessing a working knowledge of geology, mineralogy, botany and at least first-aid medicine and surgery—in short, a true "all-around man," a credit to his planet. There are times when I wish that fortune had made me an engineer. No engineer was ever candidate for president; his life is too interesting.

* * *

Now, when you stand beside some lofty benchmark, engulfed in the high-rolling waves of summer wind, try to look straight down through the hill and see the blue sea-level surface ideally extended beneath it, and forming its mathematical base, which places it on a common platform with all the mighty heights of the world—Andes, Himalayas, Kuen Luns, Rockies—and then picture the engineer, the level-finder, of the Coast and Geodetic Survey, when laboriously, systematically, with hand and eye and brain working in perfect co-ordination, he lifted a parallel of the sea surface to the roof of the continent.

Step by step such work has to be done. The globe curves, and the sea curves with it. The engineer must eliminate the effect of the curvature, so that at every stage the plum line is normal to the line of sight over the level. His multitude of little tangent lines, each successively higher or lower, as the land rises or falls, blend into a smooth curve in calculation, and so follow the profile of the globe.

If he had brought a bit of the sea along with him it would have balanced itself gravitationally level at every observation point. But from point to point it would have been lifted higher above the level of the great sea. If the sea should suddenly swell and rise and overflow the continent, its surface would, in succession, flow a sparkling film of water, over each higher and higher bench-mark on the hills, until it flooded the highest of them all, and left America submerged under a spherical water surface, the tip of its nose in the rockies, just breaking the smooth shield with a sparkling ripple at the touch of a breeze.

* * *

The mean sea-level ought to be the datum plane for all surveying, but, unfortunately, it is not universally used. I learn from Mr. E. Lester Jones, the superintendent of the United States Coast and Geodetic Survey that there are cities and even States in the Union which use datums of their own, a custom calculated to cause confusion, and ultimately great trouble and expense for correction.

In New York the public work datum plane is nearly three feet above the mean sea level as determined by actual observation at Sandy Hook, and the Dock Department datum is over two feet below that standard.

Garrett P. Serviss.

DATE. CONSIGNMENT. TO WHOM. PORT OF INSTRUCTIONS AT

a.

1000-TON BARGE CANAL TO TAP LEHIGH VALLEY

Proposition Aimed to Realize to the Full the Vast Possibilities of the Delaware Water Route and Greatly to Energize Pennsylvania Industries

Public Ledger 1/10/19

Written for Business Section of Public Ledger

By THOMAS B. STOCKHAM

Chairman of Civic and Traffic Bureau, Morrisville, Pa., Chamber of Commerce

IT HAS been said that the Delaware River is the Clyde of America, but the time is not far distant when the Delaware River shall be the synonym for shipping and shipbuilding in all the languages of the world. From Wilmington to Trenton; from Morrisville (ooposite Trenton) to Easton; from Easton (up the Lehigh) through Bethlehem and Allentown to Mauch Chunk; from Bordentown, on the Delaware, across New Jersey, to the Raritan Bay; and from Delaware City on the Delaware, across the State of Delaware, to the Chesapeake, there are such wonderful water transportation possibilities as almost to stagger the imagination.

At the head of tide-water is situated Trenton, with vast industries of clay, iron and steel; across the river at Morrisville is building the largest freight yard in the United States and to these two places is now dredged a twelve-foot channel. Ninety-odd miles above are the largest anthracite deposits of the country. Connecting these mines is an antiquated canal which, built for barges to carry 110 tons of coal, has been allowed to silt up so that it will now float only eighty-five tons to a bottom. Thus the choking of canal traffic has made it unprofitable for boatmen to carry on business. Along this canal are three large industrial cities, Easton, Bethlehem and Allentown.

The advantages of the New Jersey ship canal and the purchase and enlargement of the Delaware and Chesapeake Canal are manifest by the fact that they are now a part of the Congressional program for the Atlantic Deeper Waterway System so tirelessly advanced under the leadership of Representative J. Hampton Moore. And now we desire to direct attention to other possibilities for the development of the Delaware and Lehigh Valleys.

Reported to Canal Commission

The Morrisville Chamber of Commerce has caused to be made a superficial survey of the Delaware and Lehigh Canals and has made a report to the canal commission of the United States railroad administraiton giving facts and making recommendations for a reconstructed canal from Morrisville to Mauch Chunk. This report recommends the construction of a 1000-ton barge canal from tide-water in the Delaware River at Morrisville and Trenton to Coal Port (one and one-half miles above Mauch Chunk). There are two separate canals, one running from Bristol along the Delaware to Easton, and the other from Easton along the Lehigh River to Coal Port.

At Morrisville the canal traverses a course within fifty feet of the Delaware. It is proposed to extend the navigable channel one-half mile through the western end of the river at this point to the place where the canal approaches so near the stream, and by two locks with a total lift of 31.5 feet, convey the traffic from the river into the canal to Easton and Mauch Chunk.

A summary of the findings of this committee reveals that there are eighteen locks from Morrisville to Easton, twenty-five locks over all to Bristol, and by reconstruction into a modern barge canal, three locks will take the place of eight of the present locks, with two added at Morrisville and five eliminated to Bristol, making fifteen modern locks from Morrisville to Easton, with a total lift of 171.25 feet for a distance of 49.5 miles. There are three dams in the Delaware to Easton, the first at Taylorville and Washington Crossing, the second at New Hope and Lambertville, and the third at Lumberton and Raven Rock.

Details of Needed Construction

The Lehigh Canal proper has fifty-two locks, six of which are flood locks, leaving forty-six lift locks. By combination in a reconstructed canal, ten can be eliminated, leaving thirty-six operative locks, with a lift of 392.25 feet from the Lehigh River at Easton to the same at Coal Port, a distance of 48.5 miles. This division enters the Lehigh River nine times, traversing the same a distance of 14.5 miles. To reconstruct this waterway thirty-four miles of canal would be rebuilt and 14.5 miles of river dredged.

There are ten dams in the Lehigh River to Mauch Chunk, together with the three in the Delaware and the one at the mouth of the Lehigh at Easton, which make a total of fourteen. There flows over the breasts of these dams vast quantities of unharnessed water, which, properly utilized, would generate millions of horsepower, by hydro-electric plants, to operate the locks and boats of a modern barge canal and to supply tremendous power to the great industries of the Lehigh and Delaware Valleys.

The total distance from Morrisville to Coal Port is about ninety-eight miles; the total lift from tide-water to the end of the canal, piercing the heart of the anthracite regions, is 563.5 feet; the total number of lift locks over the whole canal as it now is is seventy-one, and by a reconstructed barge canal, this number will be reduced to fifty-one. This cutting off of twenty locks means a saving of about 40 per cent in time of locking and resultant operating expenses.

c.

Present Waterway Obsolete

The failure of the canal to do its part is that its operation and facilities have not changed in the whole eighty-odd years of its existence. It has not kept pace with the times: coal cars have grown from twelve to fifty-ton capacity and the link coupling and hand brake have been replaced by the modern drawbar coupling and airbrake. While the canal barge capacity has really decreased, and the methods of locking and operating the canal are as slow and antiquated as if we were still living in the days preceding the Mexican War.

The railroads of the country, in the crisis of the European war, were unable to carry the freight given them, and many industries of this region were hampered in production because of embargoes. The period of reconstruction and expansion would intensify this condition in such a great industrial center as the Delaware and Lehigh Valley regions, unless the remedy be applied promptly.

Easton, at the mouth of the Lehigh, has more than forty industries such as car works, foundries, factories of brass and iron, paint and chemical manufactories, textile and knitting mills and extensive cement plants; Bethlehem, with twenty-five industrial plants, has, first of all, the great steel mills of the same name and others of knitting and silk, and many foundries; Allentown has numerous industries engaged in the manufacture of baskets, belt dressing, belting, boots and shoes, foundries, machine work and cement while Catasaqua, Northampton, Slatington, Palmerton and Mauch Chunk collectively have more than forty-five industries engaged in the mining of slate, the manufacture of silk, iron and steel, cement and knitted goods, and the great zinc works at Palmerton, second in size to the Bethlehem steel plant.

It may be noted that 79 per cent of all the slate quarried and manufactured in the country comes from this region; that 36 per cent of all the cement manufactured is taken out of these same hills, and that, most important of all, millions of tons of hard coal are taken from the foundations of these mountains.

d.

Advantages of Water Route

Mr. Schwab has said that he will unload at the port of Philadelphia if the railroads will make better rates. Why not eliminate the railroads? H. E. Lewis, vice president of the Bethlehem Steel Company, stated to our committee that his company received from South America about 2,500,000 tons of ores a year and shipped it to New York and then by rail to Bethlehem. With a 1000-ton barge canal, freight rates by rail need not be a consideration, as his ships could come up the Delaware to Philadelphia and tranship to barge for tow to Morrisville, and thence to Bethlehem by canal.

Mr. Lewis further said that in normal times his company received about a million and a half tons of soft coal from West Virginia by an all-rail route. This coal could be shipped to Baltimore and then make an all-water trip to the plant.

If such a canal could receive about 4,000,000 tons of freight for one plant alone, northbound, allowing for any exigency for the curtailing of this amount, we have the entire industries of the Lehigh Valley to make up the balance necessary to make this canal run full capacity northbound. No other canal to the coal regions can expect such returns upon the money invested as this.

More Prestige for Philadelphia

The capacity of a 1000-ton barge canal is 10,000,000 tons freight per annum. The New York Barge Canal is such. It is 300 miles long and cost $142,000,000 to build. It is not expected to run full capacity for twenty-five years or more, but is considered a good investment and a far-sighted project by the people of the State of New York. How much more valuable must a canal be to run from the Lehigh industrial center to the Atlantic coastal system, when it seems evident that it will run at least 80 per cent capacity the first year of operation?

This waterway would tap the inland waterway almost midway between Boston and Norfolk. It could supply all the great cities of the Atlantic Coast with coal, cement, slate, lime, iron, fabricated steel and numerous other manufactured commodities.

Let Philadelphia help make this thought a reality. It will give her better rates, better service and more prestige. If co-operation is spelled M-i-s-s-i-s-s-i-p-p-i, why not spell it also D-e-l-a-w-a-r-e?

330

CARGO. CONSIGNMENT.

DATE. | No. of. | CHARACTER OF. | TO WHOM. | PORT OF | INSTRUCTIONS AT

DATES OF MANY IMPORTANT EVENTS

WHEN SOME LOCAL OCCURRENCES TOOK PLACE.

A LIST WORTH PRESERVING. COMPILED BY AN EAGLE REPORTER.

Inquiry is frequently made through the Eagle for dates of important events of local, State and national importance. They include fires, horrors, explosions, etc. The following are a few worthy of note:

Jan. 9, 1889—Wreck of silk mill and Reading Railway paint shop by a cyclone. A number of lives were lost.

March 11 and 12, 1888—Big blizzard and general tie-up of railroad traffic.

Feb. 8, 1895—Blizzard and tie-up of railroads, especially the East Penn and Lebanon Valley.

May 24, 1877—Burning of the Scott Works.

Oct. 24, 1892—Rose Glen wreck.

Jan. 15, 1872—Stichter's hardware store burned.

Floods in the Schuylkill—1851; Sept., 1869; May, 1894, and Feb. 28, 1902.

May 12, 1890 — The Reading changed the running of its trains on the Reading division from left to right.

Jan. 10, 1842—The Reading road was opened to Pottsville.

Monday, April 20, 1857—The roof of Reading Company's shop at Seventh and Chestnut streets collapsed from heavy snow.

April, 1866—The Reading Company's car shop was opened for business.

Sept. 19, 1890 — Shoemakersville wreck.

Oct. 14, 1892—Parade of Reading's school children.

Feb. 6, 1891—Destruction by fire of Sternbergh & Son's Bolt and Nut Works.

July 2, 1888—Burning of the Reading Hardware Company's plant.

July 22, 1877—Burning of the Lebanon Valley railroad bridge by rioters.

July 23, 1877—State militia fires into crowd at Seventh and Penn streets.

April 14, 1877—Strike of the B. L. E. of the Reading.

Oct. 4, 1877—Wreck on the Pickering Valley branch of the Reading.

Oct. 18, 1884—William M. Kelchner, Superintendent of Signals, was killed near Exeter.

Dec. 27, 1887—Knights of Labor strike.

Locomotives Explode.

The following were some of the locomotives which exploded in the early days:

Neversink, Tuesday, March 2, 1847.
Engineer, Monday, May 1, 1848.
Perkiomen, Monday, March 28, 1859.
Patapsco, Monday, Oct. 14, 1867.
Iowa, Monday, Dec. 23, 1867.
Santee, Monday, July 12, 1869.
Annapolis, Monday, Dec. 20, 1869.
Sherman, Thursday, April 14, 1870.
Swatara, Monday, Sept. 5, 1870.

June 1, 1889—Great flood in the Susquehanna River at Williamsport. Stream reached 33 feet 6 inches above low water mark at 10 p. m. of that date.

June 23, 1890—Wreck at Tuckerton.

April 20, 1891—P. H. & P. branch opened for business to Shippensburg.

May 7, 1893—Opening of the Reading terminal, Phila.

March 15, 1894—Engine 893, drawing No. 2 express on the Reading, John Driscoll, engineer, made the distance, three miles between Leesport and Tuckerton, in 75 seconds, the fastest time on record.

Feb. 22, 1896—Gordon Planes were abandoned.

The foot bridge at the P. & R. station was started in the fall of 1886 and placed in service early in the summer of 1887. It is used by hundreds of thousands of people annually.

Establish Hall Signals.

The Hall signals were established on the Reading as follows:

Aug. 1, 1896—Mt. Carbon to Port Clinton.

July 3, 1897—Port Clinton to Dauberville.

Jan. 1, 1900—Dauberville to Reading.

Dec. 15, 1899—Reading to Birdsboro.

Dec. 1, 1899—Birdsboro to South End.

July 6, 1901—Reading to Sinking Spring.

July 27, 1901—Sinking Spring to Robesonia.

Aug. 10, 1901—Robesonia to Prescott.

Sept. 11, 1901—Prescott to Cleona.

[illegible]d through to Harrisburg in No[illegible]mber.

[illegible]ast Penn equipped in fall of [illegible]and winter of 1911.

[illegible]ay 1, 1869—East Penn road [illegible]d by the Reading.

[illegible]. 3, 1874—Reading passenger [illegible] was opened for business.

[illegible]1, 1897—The Reading took [illegible] of the Perkiomen road.

[illegible] account of the flood in the Sus[illegible]nna river, freight and passen[illegible] trains of the Penn'a Railroad [illegible]n running via the Lebanon Val[illegible]and Main Line of the Reading, [illegible]day evening, March 4, 1904. Pas[illegible]ger trains were discontinued Sun[illegible]y, March 6 and freight Tuesday, [illegible]arch 8. Passenger trains were [illegible]ain sent via Reading Monday, [illegible]arch 7.

The Spring street subway was [illegible]arted Tuesday, Nov. 12, 1907, and [illegible]nofficially opened Thursday, April [illegible], 1909. Trains resumed schedule speed over the subway at 5 p. m. Monday, April 26, 1909.

Nov. 24, 1909—Big wreck on the Frackville branch.

May 12, 1899—Exeter wreck.

March 5, 1902—Heavy snow storm.

Feb. 21 and 22, 1902—Great sleet storm. All wires prostrated. Communication cut off for several days. It was the worst storm on record. The damage to the wires in Eastern Penn'a amounted to many thousands of dollars. It required weeks to straighten out the tangle.

Feb. 13, 1899—Destruction by fire of Mohn's hat factory.

Great Chicago Fire.

Oct. 8, 1871—Great Chicago fire; loss $190,000,000. It swept over 3 1-3 square miles. More than 98,000 people were rendered homeless and over 250 persons lost their lives.

Nov. 9, 1872—Sixty-five acres of the city of Boston were laid waste by fire. More than 800 buildings were destroyed. The property loss was $80,000,000.

The greatest fire that ever visited New York was Dec. 16, 1835, when 674 buildings were consumed with a total loss of $17,000,000.

London's greatest fire broke out Sept. 2, 1866, lasting four days. Eighty-nine churches and many public buildings and 13,200 houses were destroyed. About 200,000 persons were made homeless. The ruins covered 456 acres.

Portland, Me., was destroyed by fire July 4, 1866. The loss was $15,000,000 and 10,000 persons were rendered homeless.

In Phila., in 1850, 350 buildings were burned at a loss of $1,500,000.

May, 1851, 2,500 buildings were burned in San Francisco at a loss of $3,500,000.

The forest fires in Michigan and Wisconsin in the fall of 1871 wiped out 2,000 human lives, besides the destruction of millions of dollars worth of timber.

An $8,000,000 Blaze.

Paterson, N. J., was visited by a fire Feb. 9, 1902, entailing a loss of $8,000,000.

May 3, 1901—A fire at Jacksonville, Fla., did damage to the amount of $10,000,000.

Feb. 7, 1904—Baltimore was swept by flames, entailing a loss of $85,000,000. It started on a Sunday.

Nov. 13, 1904—Snowstorm and general prostration of wires.

The Boyertown Tragedy.

Jan. 13, 1908—Boyertown Opera House horror, when 171 men, women and children perished.

April 18, 1906, at 5.15 A. M.—San Francisco was visited by a terrible earthquake, followed by the destruction by fire of a great portion of the city.

May 31, 1889—Johnstown flood, in which many hundreds of lives were lost.

Feb. 10, 1889—Blizzard and delay to traffic.

Dec. 25 and 26, 1909—Twenty and one-fourth inches of snow fell in this city.

Nov. 6, 1884—Wreck of the stack at the Robesonia furnace.

Nov. 6, 1884—Explosion of the Volcanic Powder Works near Stouchsburg.

Sinking of the Maine.

Feb. 15, 1898—Sinking of the Maine in Havana Harbor.

Feb. 2, 1897—Old State Capitol at Harrisburg destroyed by fire.

Feb. 1, 1911—Great dynamite explosion at Jersey City. Central Railroad station ruined. Thirty people killed.

July 2, 1862—First car hoisted over Mahanoy Plane; placed in operation in October of the same year.

Sunday, Nov. 13, 1904—Snow, rain and sleet. Wires prostrated and town in darkness.

June 26, 1870—Reading car shop destroyed by fire.

Sept. 21, 1905—Pay car of the Reading wrecked in collision near Moors Hill, P., H. & P. branch.

Sunday, Feb. 5, 1911—Electric interlocking plant installed at Oley street.

The Reading's new locomotive shop, on North Sixth street, was started in 1902 and finished in 1903.

Monday, Oct. 27, 1902—Opening of the Belt Line.

Thursday, Aug. 27, 1901—P. & R. engine 206, built at the Reading shop, reeled off five miles in 3 minutes 26 4-5 seconds. One mile was made in 39 4-5 seconds. The trial was made on the New York division. This engine was the fleetest of its size ever constructed in this city.

October, 1879—Introduction of the telephone by Henry W. Spang. The exchange was located in the Eagle Building.

Sept. 1, 1883—Introduction of electric street lights.

Nov. 27, 1888—First electric car was run on the East Reading road.

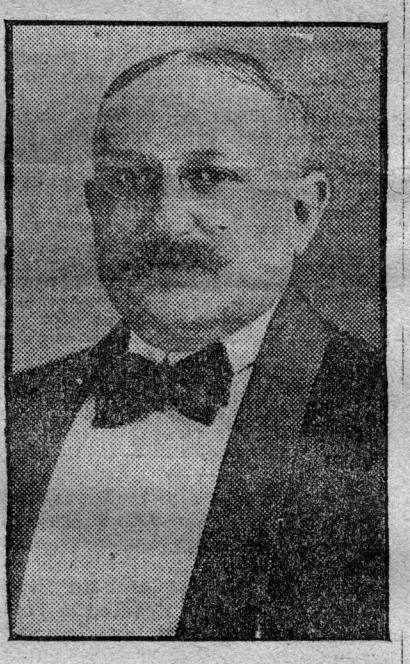
August, 1874—The first street car was run on Sixth street.

PLAN MANY SOCIAL EVENTS FOR THE COMING SUMMER

Julius Kaufmann New President of the Mt. Olympus Family Circle.

With the enthusiastic officers recently elected, the Mt. Olympus Family Circle will introduce a number of original novelties in the line of entertainment at the club house located on the east slope of Mt. Penn, near the Eagles' Home.

The building, which is artistic in appearance, is equipped with all the modern and latest improvements. It



President Julius Kaufmann.

is lighted by electricity, has running water and up-to-date furnishings.

The rustic looking railing which encloses the spacious porch, adds considerable to the attractiveness of the exterior. Many passengers of the Gravity Railway Company cars, which pass the club premises admire the pretty building.

The officers are planning a programme of summer social functions, but an event to precede the opening of the home, will be a subscription dance, which promises to be one of the principal social affairs of the year. No date has been fixed.

The new officers are:

President, Julius Kaufmann; Vice President, Jonas Sondheim; Recording and Financial Secretary, Herman Hammel; Treasurer, Nathan P. Cohen; Board of Govenors, Louis Adler, J. M. Cohn, S. S. Schweriner, Leo Hammel and Henry Bernheimer.

The club was organized three years ago, and has about 40 resident and 20 non-resident members. In the latter class are included traveling salesmen from other cities who frequently visit Reading on business. Among the cities represented by non-resident members are: New York,

Treasure Nathan Cohen.

Rochester, Buffalo, Syracuse, Phila., Allentown, Harrisburg, Lebanon, Norristown, Pottstown and Pottsville.

Julius Kaufmann, President, resides at 164 Clymer street, and has been an enthusiastic worker for the club since its organization. He is

Secretary Herman Hammel.

local manager of the Sun Life Assurance Company of Canada, and has an office in the Baer Building.

Vice President Jonas Sondheim is a retired business man, who formerly conducted a clothing store at Mauch Chunk, and resides at 1554 Mineral Spring Road.

Secretary Herman Hammel, resides at 43 South Ninth street, where he is engaged in the spectacle busi-

Trustee Sig. S. Schweriner.

ness. Mr. Hammel has always taken an interest in the club affairs and was chosen Secretary when the circle was formed.

Nathan P. Cohen, Treasurer, is a member of the firm of Cohen Bros., jewelers, 528 Penn street, and resides at 158 Clymer street.

What Wise Men Have Said.

No young man believes he shall ever die.—John Hazlitt.

We never desire earnestly what we desire in reason.—La Rochefoucauld.

The greatest of faults, I should say, is to be conscious of none.—Carlyle.

Genius is always impatient of its harness. Its wild blood makes it hard to train.—Holmes.

Oh, what men dare do, what men may do, what men daily do not knowing what they do!—Shakespeare.

The epochs of our life are not in the visible fact of our choice of a calling, a marriage, our acquisition of an office, and the like, but in the silent thought by the wayside as we walk; in a thought which revises our entire manner of life.—Emerson.

Love, love him who hurt you, whom you censured, whom you did not love, and all that concealed his soul from you will disappear, and, as through fresh water, you will see on the bottom the divine essence of his love, and there will be no need for you to forgive him—you will have to forgive only yourself for not having loved God in him, within whom God was, and for not having seen him because of your lack of love for the man.—Tolstoy.

Woman City Treasurer.

The only woman City Treasurer in California is Miss Pearl Hunting, who has filled the office of Treasurer and Tax Collector of Santa Monica since last May, when Ralph Bane, the regularly elected Treasurer, suddenly left the city and failed to return to explain a discrepancy of $23,000 in his accounts.

THE GREATEST NAVAL DEMONSTRATION IN THE HISTORY OF THE WOR

FACTS AND FIGURES RELATING TO MIGHTY ARMADA WHICH AMERICA IS SENDING TO PACIFIC---JAPAN'S WARLIKE PREPARAT

The greatest naval demonstration in the world's history, and the assembling of the biggest armada of warships ever seen on any sea, will take place when the 51 fighting ships of the Pacific fleet meet off San Francisco. The great fleet that sailed the English Channel at the jubilee of Queen Victoria could not stand up against it.

The fleet that dotted Oyster Bay when President Roosevelt reviewed his fighting army numbered but 35 ships.

The rendezvous at Hampton Roads when the great nations of the earth sent representative ships, numbered 38 American vessels and 12 foreign ships.

The Pacific fleet will will be made up of the following:

First-class battle ships	19
Armored cruisers	8
Protected cruisers	9
Gunboats	6
Torpedo boat destroyers	6
Monitors	3

Whether it is a demonstration to warn Japan or a test cruise for men and ships, the eyes of the world are upon the United States.

Sixteen battleships, 500 feet long; masses of honeycombed steel, with the agility of a yacht; fitted with armor over a foot thick and shooting 13-inch shells to the horizon and beyond, will be in command of "Fighting Bob" Evans.

In company with the battleships, but on an independent voyage, will go a flotilla of six torpedo-boat destroyers, those scorpions of the navy that fly at an enemy in the dark, sting with a torpedo and disappear in the night with the speed of an express train.

Assembling in the Pacific are three floating fortresses, new battleships that have just left the shipyards. Joining them are eight armored cruisers, which are ships that deal as heavy a blow as a battleship, with the speed of an Atlantic liner, scouters and fighters, too, as Ki[illegible] id [illegible] en he [illegible] "s[illegible]r and soldier, too." Nine big protected cruisers, six white-coated gunboats and three of the ugly, but fighting, monitors, will rendezvous off the Golden Gate.

When all shall have come together off San Francisco, there will be a fleet of 51 fighting machines. To this aggregation will be added a fleet of coal colliers, supply, repair and water vessels, making a total of about 70 defenders of the nation. The United States Navy now is the second naval power in the world. Only England has a greater fleet. Of necessity, the English ships must remain scattered among her dominions, on which the sun never sets. Can she match the formidable display of this, the greatest nation on earth?

Ten Miles of Ships.

Placed end to end, with bows and sterns touching, the ships would make a boulevard of steel along which one might walk four miles. Strung out at anchor in single file, the fleet would stretch away for 10 miles, which is nearly as far as the eye can reach at sea, and with the farthest ships hull down on the horizon. Anchored four abreast for a review—such as President Roosevelt steamed through at Oyster Bay and Hampton Roads—the four lines would stretch away for two and a half miles each.

In fact, the administration is sending its entire fighting strength to the Pacific. There will not be a battleship or an armored cruiser on the Atlantic Coast, nothing but gunboats and torpedo boats being left in the East. The 19 battleships to make the voyage cost over $99,000,000 and are manned by over 15,000 men and 725 officers.

Manning the Pacific fleet are 30,000 officers and seamen. Were they formed into a parade the line would require four hours' time to pass a given point. As militia they would make 30 regiments of soldiers. There are but 35,000 men in the entire navy, so nearly the entire navy will be on the cruise.

The fighting machines bristle with a total of 2,184 guns. Were they placed 20 feet apart in the wall of a fort, the broadside would extend a length of eight miles, or make a square two miles long on each of its four sides.

The big guns that constitute the main batteries of the fleet number as follows:

Four-inch rifles	96
Five-inch rifles	450
Six-inch rifles	252
Seven-inch rifles	120
Eight-inch rifles	168
Ten-inch rifles	14
Twelve-inch rifles	62
Thirteen-inch rifles	20
Total	1,180

The publication of the fact that during target practice on the British Channel fleet in the presence of King Edward one gun made 19 hits in 21 shots, thereby earning a decoration from the King, naturally touched the pride of the American naval officers. They have looked into the records of the American gun pointers and have found no reason to fear a comparison with the gunners of any other navy.

Taking some of the six-inch guns in the Atlantic fleet, one gunner on the armored cruiser Maryland made 11 shots and 11 hits in one minute. A gun on the battleship Ohio was fired with a perfect score at the rate of 10.81 a minute. A six-inch gun on the battleship Maine has a record of perfect score at the rate of 10.41 a minute, and the battleship Missouri's record was 10.30 shots a minute, each lodged in a target.

But in the way of small guns these six-inch records become insignificant. A three-pounder on the battleship Virginia made 20 shots and 20 hits in 75 seconds. Another gun made 10 shots in 10 minutes in 22½ seconds, a remarkable average of 26.67 shots and hits a minute.

The battleship Illinois, that holds the target record of the navy at the present writing, made a per cent. of 75.782 in using all guns.

The crew of the after turret on the Alabama has made 11 straight hits with the 13-inch gun.

$7,000,000 For Coal.

The voyage will cost Uncle Sam millions. It will take 253,000 tons of coal to get only the battleships and torpedo-boat destroyers around to the Golden Gate. The cruise will take four months' time, and the coal bill will be $2,000,000. To this must be added the bill for four months' maneuvering of a fleet of 51 ships on the Pacific, which will mean $3,000,000 more. Then it will require $2,000,000 additional fuel and four months' time to get the fleet back into the Atlantic, making a total of $7,000,00[illegible] devoted to the cruise and sea tactics. The Navy Department has contracted to have mountains of coal at these stopping places:

	Tons.
Trinidad, West Indies	7,000
Rio Janeiro, Brazil	6,000
Punta Arenas, near Cape Horn	40,000
Callao, Peru	50,000
Magdalena Bay, Mexico	60,000
San Francisco, Cal	80,000

The battleships are expected to arrive at Trinidad, December 24, the day before Christmas, and will stay there five days. They will be at sea New Year's Day and will reach Rio de Janeiro January 11, and will make a stop of 10 days there to give the men shore leave and recoal the ships.

Punta Arenas, at the entrance to the Magellan Straits, will be reached January 31. Coaling, etc., there will take up until February 5. The sail through the straits and up the west coast of South America to Callao, Peru, is expected to take until February 18, and there will be another stop of 10 days at that port. Leaving there February 28, the ships will arrive at Magdalena Bay March 14, where they will have their target practice. The day of departure from Magdalena Bay and of arrival at San Francisco are dependent upon the time it will take to complete the target practice, but it is expected the fleet will have concluded this work by April 25 and will arrive in San Francisco Bay on May 1.

The torpedo boat flotilla left Hampton Roads on Dec. 2. Because of their greater speed, more limited draft and smaller tonnage the torpedo-boat destroyers will stop at a much larger number of places than the big battleships. Their stay at each port will be about four or five days. The itinerary contemplates their arrival at the various places as follows:

Trindad, Dec. 15; Para, Dec. 26; Pernambuco, Jan. 5; Rio de Janeiro, Jan. 15; Montevideo, Jan. 25; Punta Arenas, Feb. 8; Talcahuana, Feb. 20; Callao, March 4; Panama, March 16; Acapulco, March 28; Magdalena Bay, April 6. As in the case of the battleship fleet, the dates of departure from Magdalena Bay and arrival at San Francisco are dependent upon completion of target practice in the [illegible]

To Feed 30,000 Men.

The list of supplies to feed the 30,000 men in the fleet is appalling. The Navy Department has contracted for:

Canned peaches, pounds	475,000
Canned peas, pounds	50,000
Canned apricots, pounds	225,000
Dried apples, pounds	30,000
Dried peaches, pounds	30,000
Pickles, pounds	15,000
Vinegar, gallons	10,000
Evaporated milk, pounds	25,000
Condensed milk, pounds	75,000
Beans, gallons	30,000
Lima beans, pounds	65,000
String beans, pounds	250,000
Canned peas, pounds	200,000
Canned corn, pounds	200,000
Canned tomatoes, pounds	150,000
Pepper, pounds	8,000
Mustard, pounds	2,000
Salt, pounds	25,000
Rice, pounds	100,000
Raisins, pounds	100,000
Sirup, gallons	5,000
Cocoa, pounds	25,000
Macaroni, pounds	10,000
Flour, pounds	1,200,000
Corn meal, pounds	30,000
Oatmeal, pounds	10,000
Vanilla extract, pounds	500
Cheese, pounds	20,000
Catsup, gallons	5,000
Sauerkraut, pounds	30,000
Onions, pounds	100,000
Potatoes, pounds	800,000
Turkeys, pounds	50,000
Eggs, dozen	10,000
Salmon, pounds	80,000
Lard, pounds	150,000
Fresh beef, pounds	1,000,000
Fresh mutton, pounds	100,000
Canned ham, pounds	50,000
Salt pork, pounds	150,000
Corn beef, pounds	100,000
Bacon, pounds	50,000
Smoked ham, pounds	300,000
Sausage, pounds	30,000
Ice, pounds	100,000
Chipped beef, pounds	40,000

For furnishing 1,200,000 pounds of flour there were six bidders, their prices ranging from $35,760 to $37,200 for the entire amount. For furnishing 1,000,000 pounds of beef there were eight bidders, whose prices varied from $70,800 to $87,300 for the whole amount.

And this is what it costs, according to Navy Department figures, to maintain each type of ship for one year:

Battleship, $624,935.48.
Armored cruisers, $544,399.92.
Protected cruisers, $375,537.13.
Monitor, $170,286.70.
Gunboat, $110,332.43.
Torpedo-boat destroyer, $94,944.17.

"A Frolic or a Fight."

M[illegible] the fleet is [illegible] in the Pacific. At a dinner given to Admiral Evans in New York recently, Admiral Evans expressed n
bition, such as he had once b
to make the language of a fri
nation the prevailing speech
certain place. He was perfectly
lomatic, except when, blunt se
that he is, he informed his he
that they would not be disappo
whether the cruise meant "a
or a fight."

Despite the perfunctory denia
the Department at Washington
the visit of the battleship fleet t
Pacific means anything but a c
for instructions and experience,
feeling is gradually growing
Washington that it is a stra
move on the part of the Admini
tion which, while it does not ind
any fear of immediate hostilitie
a move to prevent any such i
near future. The officials at
Navy Department and the Pre
himself believe that with the b
ship fleet on the Pacific Coast
Government will be in better
tion in case of open hostilities
to have the fleet scattered along
Atlantic Coast. It has been poi
out that with the fleet in P
Sound it will be as near to Jap
Japan will be to the Philippine

It will take a Japanese fleet
10 to 12 days to reach the P
pines, and, if necessary, our
could reach Hawaii long before
Japanese could get there. It w
require as powerful a fleet a
one soon to make the cruise to
cept a Japanese fleet on its
to this country. The Japanes
is claimed, could not make the
through the Suez Canal to the
lantic Coast and be in proper
to give battle at the end of
a journey. The facilities of
United States to dock and repa
big vessels of the Pacific flee
the Pacific Coast make it pos
for each vessel, when required
active service, to be in prime c
tion, even for a trip across
Pacific, while Japan will be at a
advantage, being unable to doc
repair, if it attempted a trip fo
fleet to the Atlantic Coast.

Whether it is a practice crui
a display of force it is a fact
[illegible]
when [illegible] drawing
racial line in the United States
the two nations loomed up as r
for control of the Pacific
commerce of the East.
strategists remembered the
blow Japan struck Russia. In
of the fact that Japan was crip
financially by her war with Ru
she has been getting on a war
ing.

Captain Ignez Rodie, of the
trian army, recently wrote, and
tain N. S. Jarvis, of the U
States Army, translated for pub
tion here these observations
Japan:

"In her arsenals alone 5
workmen are employed night
day, and similar energy is expre
in her steel gun foundries and p
der works.

"In the gun and cartridge facto
of Tokio and Nagoya over 20
men are at work. The capacity
these factories and a third plant
cently constructed to the north
Tokio is 500 guns daily. The
works in Tokio alone have an ou
of 600 shells and shrapnel for
guns. Similar intensiveness is
hibited in the government facto
for artillery fuses, pioneer mate
etc."

Fleets of the Two Nations.

The following table shows the
tal naval strength of America
Japan, with the number of ves
built and building. The table d
not include vessels over 20 years
age, unless they have been rec
structed since 1900. Transpo
colliers and auxiliaries are also eli
inated from the count:

VESSELS COMPLETED TO JUNE 1, 190

	United States.	Ja
Battleships	21	
Armored cruisers	8	
Cruisers	43	
Destroyers	16	
Torpedoboats	32	
Submarines	8	
Coast defense	11	

VESSELS BUILDING OR PROJECTED

	United States.	Ja
Battleships	8	
Armored cruisers	4	
Cruisers	3	
Destroyers	5	
Torpedoboats	..	
Submarines	4	

PERSONNEL.

	United States.	Ja
Flag officers	18	
Captains and Commanders	182	2
Other line officers and engineers	697	1,5
Medical officers	254	3
Pay officers	188	2
Warrant officers	634	1,0
Enlisted men	33,500	41,0
Marine officers	279	

THE DEFENDERS OF THE NATION.

FIRST-CLASS BATTLE SHIPS.

Ship.	Length, feet.	Tons.	Speed.	Horse-Power.	Cost.	Guns.	Armor.	Coal, Tons.	Officers.	Men.
Connecticut	450	16,000	18	16,500	$ 6,071,066	74	10 to 12 in.	2,200	41	1,080
Louisiana	450	16,000	18	16,500	5,746,313	74	10 to 12 in.	2,200	41	840
Minnesota	450	16,000	18	16,500	5,338,447	74	9 to 12 in.	2,200	41	840
Vermont	450	16,000	18	16,500	5,174,911	74	9 to 12 in.	2,200	41	840
Kansas	450	16,000	18	16,000	5,214,520	74	9 to 12 in.	2,200	41	840
Nebraska	435	14,948	19	19,000	4,789,875	74	10 to 12 in.	1,700	41	840
Virginia	435	14,948	19	19,000	5,265,524	74	10 to 12 in.	1,700	41	840
Georgia	435	14,948	19	19,000	5,228,403	74	10 to 12 in.	1,700	41	840
New Jersey	435	14,948	19	19,000	5,247,065	74	10 to 12 in.	1,700	41	840
Rhode Island	435	14,948	19	19,000	5,244,852	74	10 to 12 in.	1,700	41	840
Maine	388	12,300	18	15,600	5,381,081	44	11 to 12 in.	1,800	35	772
Missouri	388	12,300	18	15,600	5,258,260	44	11 to 12 in.	1,800	35	772
Ohio	388	12,300	18	15,600	5,265,300	44	11 to 12 in.	1,800	35	772
Alabama	388	11,565	17	11,200	4,665,820	44	14 to 16.5 in.	1,280	35	772
Illinois	388	11,565	17	12,700	4,621,408	44	14 to 16 in.	1,280	35	772
Wisconsin	368	11,565	17	12,700	4,726,894	44	14 to 16.5 in.	1,240	35	772
Kearsarge	368	11,565	16 4-5	11,700	5,043,591	44	15 to 17 in.	1,500	35	772
Kentucky	368	11,540	16 4-5	12,179	4,998,119	44	15 to 17 in.	1,500	35	772
19 Oregon	348	10,524	17	11,637	6,575,032	46	15 to 18 in.	1,500	35	772
Totals	7,817	259,964		294,816	$99,853,400	1,138		32,900	725	15,588

ARMORED CRUISERS.

Ship.	Length, feet.	Tons.	Speed.	Horse-Power.	Cost.	Guns.	Armor.	Coal, Tons.	Officers.	Men.
Tennessee	502	14,500	23	23,000	$ 4,927,122	68	5 to 9 in.	1,762	40	816
Washington	502	14,500	23	23,000	4,829,842	68	5 to 9 in.	1,762	40	816
California	502	13,680	23	23,000	4,249,404	66	6 in.	2,024	41	787
Colorado	502	13,680	23	23,000	5,421,023	66	6 in.	1,828	41	787
Pennsylvania	502	13,680	23	23,000	5,454,189	66	6 in.	1,828	41	787
West Virginia	502	13,680	23	23,000	5,492,498	66	6 in.	2,024	41	787
South Dakota	502	13,680	23	23,000	4,208,648	66	6 in.	2,024	41	787
8 Maryland	502	13,680	23	23,000	5,467,315	66	6 in.	2,024	41	787
Totals	4,016	111,080		184,000	$40,049,441	532		15,276	320	6,354

PROTECTED CRUISERS, GUNBOATS AND MONITORS.

Protected Cruisers.	Length, feet.	Tons.	Speed.	Horse-Power.	Cost.	Guns.	Coal, Tons.	Officers.	Men.
St. Louis	424	9,700	22	21,000	$ 2,740,000	68	1,500	36	634
Milwaukee	424	9,700	22	21,000	2,825,000	68	1,500	36	634
Charleston	424	9,700	22	21,000	2,740,000	68	1,500	36	634
Chattanooga	292	3,200	16	5,303	1,039,966	24	700	19	308
Cincinnati	300	3,200	19	8,290	1,100,000	24	700	20	340
Galveston	292	3,200	16	5,303	1,027,000	24	700	19	308
Raleigh	300	3,200	19	8,290	1,100,000	24	500	20	300
Chicago	325	5,000	18	9,000	889,000	24	890	32	445
9 Boston	271	3,035	15½	4,300	619,000	20	450	22	260
Gunboats.									
Yorktown	230	1,710	16	3,341	455,000	16	380	14	182
Concord	230	1,710	16	3,359	490,000	14	380	10	181
Helena	260	1,340	15	3,500	280,000	14	300	10	173
Wilmington	250	1,340	15	1,868	280,000	20	300	10	189
Annapolis	168	1,040	13	1,223	227,700	12	225	11	136
6 Princeton	168	1,100	13	835	230,000	14	230	11	130
Monitors.									
Monterey	256	4,000	13	5,140	1,629,950	16	233	20	215
Nonadnock	259	4,000	12	3,000	930,000	16	386	14	210
3 Wyoming	252	3,000	11	2,359	975,000	16	380	13	158
Totals	5,125	69,175		128,111	$19,577,616	472	8,254	353	5,437

TORPEDO BOAT DESTROYERS.

Ship.	Length, feet.	Tons.	Speed.	Horse-Power.	Cost.	Guns.	Coal, Tons.	Officers.	Men.
Whipple	443	433	30	8,000	$ 286,000	7	200	3	74
Truxton	443	433	30	8,000	286,000	7	200	3	74
Lawrence	446	446	30	6,375	281,000	7	200	3	74
Stewart	420	420	30	8,000	282,000	7	200	3	74
Hopkins	408	408	30	7,200	291,000	7	200	3	74
6 Hull	408	408	30	7,200	291,000	7	200	3	74
Totals	2,568	2,548		44,775	$1,717,000	42	1,200	18	444

COUNCILMEN AIR PHILADELPHIA'S FILTRATION PROBLEM

PERKIOMEN URGED AS CHEAPER THAN RIVAL WATERSHED

Continued From First Page

Perkiomen-Tohickon sheds would flow to an equalizing basin on the outskirts of the city by gravity, whereas the supply from the Delaware-Nesaminy project would have to be pumped.

Universal metering throughout the city was urged by these speakers as a means of cutting down the waste of water. Mr. Fuller declared that this would have the effect of bringing the city's total water demands well within the capacity of the Perkiomen-Tohockon system, making it necessary to go to the Torresdale intake for water only when there shall be a prolonged drought.

Joseph Steinmetz, vice-president of the Engineers' Club, indorsed the idea of universal metering, argued earnestly for the high pressure that is a part of the Perkiomen plan and urged Philadelphians to turn away from the notion of river water and think in terms of water from the Poconos. This also was the theme of General Russell Thayer. He read his argument for a start now upon a supply to be derived wholly from the mountains in Northeastern Pennsylvania.

Former Chief of the Bureau of Water Carleton E. Davis, now of Indianapolis, made a strong plea for adoption of the Perkiomen-Tohickon-Torresdale plan of the Water Commission. He emphasized the principle that Philadelphia should divorce itself as soon as possible from both the Delaware and Schuylkill as sources of the city's supply.

Philadelphia is doing that, he said, when it makes a begnning by going to external upland sources such as the Perkiomen and the Tohickon. The water derived there, he said, will be augmented ultimately by others coming either from the sources of the Lehigh or the upper Delaware.

Councilman Hall brought out from Mr. Davis as he had from previous witnesses the fact that the Perkiomen-Tohickon-Torresdale plan would give the city two widely separated sources of supply.

"A double supply is a double safeguard," said Davis, in reply to this question by Hall. He also stressed the advantage of increased pressure which would result from the Perkiomen system.

Chlorine as Purifier Condemned

Paul A. Maignen, a water engineer and filtration expert, who came here twenty-five years ago from Paris, condemned the use of chlorine as a water purifier. He declared he had a device by which river water may be purified.

C. P. Landreth told of an electrolytic apparatus which, he declared, will rid raw river water of bacteria and bacilli. He offered to demonstrate his device, and said the cost of operation would be only $5 a million gallons.

Dr. Wilmer Krusen, Director of Health, referred to the official reports as proof that the city's present filtration and chlorination methods have prevented typhoid fever. "This indicates a sanitary water supply," he said.

Irvin H. Bardman, editor of the Schwenksville Item, called as spokesman for a delegation from the Perkiomen Valley, said they had come only to listen that later they might make a plea against destruction of their valley and the drying up of the Perkiomen below the proposed dam.

Director Biles, questioned on this point by Mr. Hall, assured the delegation that, even in a drought, more than 5,000,000 gallons daily would flow from the great reservoir through the lower valley.

The hearing opened with the Mayor's announcement of his purpose in urging open discussion of the question.

The Mayor said:

"In my inaugural, as during the campaign, I stressed the prime necessity for a larger and improved water supply. That no mistake might be made, and millions of dollars wasted in a haphazard or partisan selection of source for this new system, I promised the people of Philadelphia, that I would appoint a commission of experts, headed by the Director of Public Works; that after a full, thorough and complete survey of all possible sources, the one best suited to serve, not only the present but future needs of the City would be selected.

"In redemption of that solemn promise, and recognizing that the problem was a highly technical one, I cast about for the best possible talent to compose this commission. After mature investigation and consideration, I appointed George H. Biles, Director of Public Works, S. M. Swaab, Consulting Engineer to the Mayor, Alexander Murdock, Chief of the Water Bureau, and four preeminent experts and water engineers, Joseph F. Hasskarl, George W. Fuller, Allen Hazen and J. Waldo Smith.

"At the Commission's first meeting, I charged it specifically, to be absolutely non-partisan and impartial in its considerations solely by my promise to select the source best suited to serve the City's needs. Not at any time, either before or since the Commission made its report, have I heard challenged, either the competency or the integrity of any of its members. That being the fact, we must necessarily assume that the investigation and deliberations of the Commission were conducted with intelligence and ability and that it arrived at its conclusions honestly and efficiently.

Findings Given to Council

"The Commission reported to me a summary of its findings and recommendations. This report I transmitted to City Council and it is now the property of your Committee for full examination, consideration and action. As soon as it is in proper shape the Commission will also furnish you with the supporting data upon which its summary or report is based.

"I know it is needless for me to suggest the fullest review by your Committee of the Commission's findings and recommendations. The members of the Commission are in attendance upon your Committe today, prepared to answer all questions and make all necessary explanations of the report. I know too, you will afford every opportunity to those who have criticized the findings and recommendations of the Commission, when that criticism is constructive, impersonal and non-partisan. I know leave the matter in the hands of this Committee, with full knowledge that it will not act hastily, that it will insist upon all honest facts being established, that it will proceed in its examination, consideration and action, impelled as I have been with but a single thought, the securing for the people of Philadelphia the best water supply available."

Former Chief Dunlap was then called. He read his statement slowly, impressively, every person in the crowd that jammed the room following every word tensely. As he read, he paused at times to look directly at Mayor Kendrick.

Mr. Dunlap said:

"Your chairman has very kindly invited me to give you my views on a new water supply for Philadelphia. I shall endeavor to do so, in a few plain statements.

"It is agreed, I believe, that Philadelphia must as a matter of common decency abandon the present Schuylkill and Delaware River sources. Filtration, followed by chlorination, has made the water supplied from these sources non-disease bearing in the past and there is a possibility that they may continue to do so as long as the filters and the chlorinating machinery properly function.

"The Schuylkill water, while not so dangerously polluted from sewage as the Delaware River at Torresdale, has at irregular periods very disagreeable taste and odors that treatment will not remove. These odors and tastes are not disease-bearing, they do not come from human excrement, they are, however, very apparent, and for that reason are, in the public mind, more objectionable than filtered sewage that is clear, sparkling and palatable—that is, if you shut your eyes and don't question whether you are the first or the fourth one that has drunk this same water during the past month.

List of Recommendations

"The plans and recommendations of the present commission are briefly as follows:

"1. Supply ample for the next fifty years, which they estimate to be 500,000,000 gallons per day.

"2. Development of the Perkiomen and Tohickon water sheds, which will supply 250,000,000 gallons per day, ample for one-half the supply required at a cost of $91,500,000.

"3. The retention of the present source of supply from the Delaware River at Torresdale for the next fifty years, for the remaining half of the city.

"The commission states the Schuylkill River is at present badly polluted and is becoming worse. It should be abandoned as a source of supply at the earliest practicable date.

"This definitely establishes a yardstick with which to measure and compare the quality of the water in the two rivers.

"The commission further state the present pollution of the Delaware River is less than that of the Schuylkill River. Sewage treatment is now practiced at several cities on the Delaware and it is proposed for a number of important cities, including Trenton, and while a high degree of efficiency from the drinking water standpoint is not to be expected, such treatment will help the general condition of this river.

Pollution of Rivers Compared

"The statement that the pollution of the Delaware River is less than that of the Schuylkill River is not in accordance with the facts. The records of the Bureau of Water show that the pollution of the Delaware River from sewage has steadily increased for the past fifteen years. For the year 1920 the two rivers were about on a par. During and since 1921 the pollution of the Delaware River has been greater than the Schuylkill River. The sum of the positive B-Coli tests, one to 1000 dilution, for 1922 and 1923 was three times greater from the Delaware than from the Schuylkill River and the monthly total was greater on the Delaware River for eighteen out of twenty-four months of 1922 and 1923.

"The above data in detail, can be secured from the Bureau of Water files. These figures previously were published as part of the yearly report, but for the past three or four years this has not been done.

"The above results clearly demonstrate that the Delaware River at Torresdale is more dangerously polluted, from sewage, than is the Schuylkill River. An observation and examination of the river bears out this fact. This pollution is caused by the discharge into the Delaware River of from 360 to 400 million gallons of sewage every day from Philadelphia and Camden, and which is carried by the tides to the Torresdale intake.

"The commission evidently used a different yard stick in measuring the degree of pollution allowable for the Delaware water or were not supplied with the B-Coli records for the past three years. The pollution of the Delaware River is much more dangerous than that of the Schuylkill River in that the sewage that is carried to the Torresdale intake is fresher.

Can Personally Verify It

"This condition is now clearly brought to your attention, it is one that you can personally verify and for your future ease of mind, I earnestly request that you do so.

"Assume that the filters along with chlorination will make the sewage non-disease bearing. Can you in justice to your own manhood and common decency sentence your constituents to drink filtered and chlorinated sewage for the next fifty years?

"The work done by the Torresdale filters, I consider, the eighth wonder of the world. You are monkeying, however, with the buzz-saw. You are living over a sleeping volcano, that has been kept inactive by the ceaseless efforts of the filter plant organization of the Water Bureau. The danger is constant, however, it is ever present—one slip would result in an epidemic.

"There are a number of instances where this has occurred. At Milwaukee in 1916, an attendant through a mistake shut off the chlorinating machine for a few hours: result 50,000 cases of gastro-intestinal troubles, 500 cases of typhoid fever and fifty deaths from typhoid.

What Happened at Chicago

"At Chicago last November, through a combination of circumstances, the proper chlorine dosage was not applied—result an epidemic.

"At Walnutport, Northampton county, Pa., the water supply was contaminated by a nearby stream, while one reservoir was being cleaned—result, 56 cases of typhoid from a population of 1000, thirty-one law suits. The jury awarded $2000 damages to the widow of one whose death was due to drinking this polluted water, judgments have been entered without trial for five others, and it is likely that this course will be followed with the remaining cases.

"At Santa Ana, California, in January this year, the water supply was contaminated for only a few hours, result, large number of cases dysentery appeared with five days; 238 local cases typhoid fever, 14 deaths. The full effect, however, will not be known as this is a tourist town, but infection was reprted from as far East as St. Louis and Illinois points.

"The keystone that supports the commission's report is the retention of the present Delaware River supply for the next fifty years.

"Settle this point before going further. You gentlemen are not chemists, but you have good sense and judgment. You know that part of the 360 to 400 million gallons of fresh sewage that is emptied into the Delaware River each day from Philadelphia and Camden must be carried by the tides to the Torresdale intake, when it is filtered and furnished to the people as drinking water. This condition is disgusting and in common decency should not be allowed to continue for a day longer than necessary.

Urges "City Decent"

"If you gentlemen recognize and appreciate these facts and appropriate funds until it hurts it will require from six to eight years to correct this vicious condition.

"Let us have a 'City Decent' before our borrowing capacity is exhausted by non-essentials, however beautiful they may be.

"Let the people decide this fall whether they want over one-half the city for the next fifty years to drink used second-hand water? Even if it is sparkling, clear and palatable, it won't be palatable if you give any thought as to its source.

"You cannot be honored with a high office without accepting its responsibilities. I don't think you want to sidestep them, but don't be lead away from the main issue which at the present time is the indorsement of the retention of the present sewage polluted lower Delaware River as a source of supply for the next fifty years, for more than one-half the city.

"The filters are as near fool proof as it is possible to make them, the operating organization is good, but accidents will happen in which event it will take more than a Philadelphia lawyer to establish your alibi in either your own minds or that of the public.

"In approving this plan you will deliberately compel those that cannot afford or neglect to buy bottled water to drink filtered sewage for the next fifty years with the certainty that an epidemic will result from the first failure of the filters and chlorinating machinery to properly function, and for all of which you and his honor, the Mayor, will be morally and the city financially responsible. I understand that damages have been awarded in every case that has been tried, and where the responsibility for the epidemic was proven.

"It is true that the typhoid death rate in Philadelphia has steadily decreased and we are now second on the honor roll. If we are lucky we will stay there, but it will only take one mistake to put us at the other end of the roll. The menace is there twenty-four hours a day and 365 days a year.

"There is a whole lot more I could state on this one subject. Forget all plans for the time being and settle in your minds this one question. I am not trying to force the city to adopt any particular plan. I never criticise any plan without offering a solution. I know that Philadelphia can get a good supply of water ample for the entire city for the next fifty years for $60,000,000, but if you gentlemen indorse the continuance of the present Torresdale Intake, there is no reason why the city should spend even this sum. If the lower Delaware River is good enough for one-half of the city, why not for the other half. This plan would only cost about $10,000,000, and would make available more funds for the city beautiful.

"It would further eliminate all doubt as to the sufficiency of the supply, every gallon taken out would be returned to the river available for further use, thereby establishing the vicious circle the nearest approach to perpetual motion yet discovered.

"I have considerable supporting data on this matter, which I will give you later or publish for the information of the people who must drink this water."

Audience in Serious Mind

As Chief Dunlap finished, there was a distinct stir throughout the room, but no applause came for him nor for any other speaker. It was a serious-minded audience, one that was plainly hungry for facts. It seemed for a moment that Councilman Hall was about to interrogate Dunlap at the close of the statement, but no question came. The former chief of the Water Bureau glanced at Chairman George Connell who conducted the proceedings in a most business like manner, and then went to a seat in the rear of the room.

George W. Fuller, the spokesman of the commission, who followed Mr. Dunlap, was examined and cross-examined more than any other speaker. His address was wholly extemporaneous. It was evident that he, more than any of his fellowmen on the commission, was trained and ready to vindicate the report they had prepared.

Statement by Fuller

Mr. Fuller, on being introduced as spokesman for the commission by Director Biles, said:

"Mr. Chairman and gentlemen of the committee: When this Water Supply Commission was appointed last February we were instructed to proceed to make a recommendation which would provide for the very best water supply procurable within the limits of reasonable cost. We have had no indication made to us as to what was the view as to taking on any particular project, and this is, without qualification, the recommendation of our commission, this report, which is in printed form, and is before you.

"We have had the opportunity to look into all these matters with a freedom from any entanglements, which is rather unique. I have in mind the commission of 1920, of which I was a member of the board of engineers. We were obliged at that particular time to deal with a project for the future which must be built piece meal, and progressively, in accordance with limited funds, which would be available from time to time. There was no such restriction here, and we have made the recommendation that the new source of supply for Philadelphia, and as it goes ahead, will provide for the future. This includes the Perkiomen and Tohickon creeks. It is going to take six or eight years to introduce the supply. In the meantime you people of Philadelphia have got to get along and live with the water supply which you now have, and that is from the local rivers.

"Question Studied 50 Years"

"This whole question of the water supply for Philadelphia has been studied for some fifty years. Very many comprehensive reports have been made, going back into the early '80's, reports which have been presented with very extraordinary thoroughness, the surveys of various upland sources, and which cover the surveys of various upland sources, the Perkiomen Creek, Neshaminy, Tohickon, the upper Delaware and the upper Lehigh.

"Now during this period of construction, of some six or eight years, it is necessary to get along with these local river waters for financial reasons, and which was the recommendation in 1899 of the commission which looked into it at great length. The commission recommended filtration of the local rive waters for financial reasons. Today things are somewhat different. There is more pollution—there is not any doubt about that. That is one of the penalties of these growing communities, cities and elsewhere.

"Now, as far as the data which our commission has studied, we find that the Schuylkill River water is the more polluted water. The stream has more population on it than the Delaware. This stream comes along over various dams. It is pooled, and following heavy rains, deposits are flushed out. That makes it a much more difficult supply to work with than on the Delaware. The Delaware has pollution in it. That is stated in all the reports, and it is a fact, but that pollution is not beyond limits of control.

"Subject Handled Energetically"

"I want to point out very plainly that this subject, for more than a dozen years, has been proceeded with very energetically and very systematically in the programme for climinating the pollution in the Delaware. From the vicinity of Lehigh avenue, or thereabouts, there are places which lead into the Torresdale intakes, not from the lower portion of the city. From that point there has been for some years the process of the installation of intercepting sewers, and treatment works, which have had already expended on them some three and a half million dollars.

"I understand there is now a bond issue providing for some nine million dollars. That work is going forward for the elimination of a substantial portion of the pollutin from those places. When that is done, when years go by, when these works are completed, then you will have an entirely different picture from what you have at the present time.

"Important Step to Consider"

"If the city of Philadelphia is proceeding in good faith to clean up the lower Delaware, that is an important step for you men on the committee to keep in mind. It is also important in connection with the question of eliminating pollution in the lower Delaware, because there is an agreement between Pnnsylvania and New Jersey to proceed as actively as practicable in cleaning up this Delaware River, and eliminating pollution, and if Philadelphia is to proceed as it is doing it is going to make a great deal of difference in the rate at which the other cities will do their part toward eliminating pollution.

"But I want to make it very plain, gentlemen, that this load factor on the Delaware River plant at Torresdale is not an unreasonable one. It is a water supply, as it comes in, that is much easier to handle than the Schuylkill. There are rarely ever any tastes or odors from the water. The bacteria, which were spoken about today by Mr. Dunlap, are not within limits, or it is not an over-burdensome situation, that is going to be so drastic a situation in itself as he pictures. That is not shown by the records, as they look to me—I have not got them all before me—but our commission has come to the conclusion, and I am firmly of the opinion, that the Delaware River water is not so polluted as is the Schuylkill, although there are times when the settling in the Schuylkill is such that that is the apparent result.

"Must Live With Conditions"

"Then, what are you going to do during the six or eight-year period when you are going to take the water from the upland sources? This is what you have got to do. You have got to live with these existing conditions. Our commission has proposed that the Torresdale Works shall be very substantially improved—that is a large factor—beyond the installation of intercepting sewers, and the elimination of the polluted matter in the lower Delaware. We will build setting basins, we will improve the preliminary filters, and we will make it possible to produce water which I believe will not be surpassed by that of any other city in the country. You will have no tastes and no odors. You are going to have complete double filters. You will have sterilization. During this period of six or eight years, when you have got to live with this water, whether you like it or not, you have got to go ahead and develop Torresdale, in my opinion, the best way you can.

"What is your programme to be? You will have to have water from upland sources. That is what the city of Philadelphia has been trying to do for fifty years. That is what the commission has recommended to the Mayor, and to you gentlemen of Council, the proposition to take water from Perkiomen and from Tohickon.

"Upland Water Cheapest"

"These particular upland sources are those which will allow the city of Philadelphia to get its upland water cheaper than from any other possible source. We do not say that it is a more desirable supply than from the Upper Delaware, or the Poconos or the Upper Lehigh, but that investment is beyond the negotiability of this city, not only by the opinion of this commission but by all the commissions. But this particular project that we have recommended of the Perkiomen and the Tohickon will give you the best water from upland sources, absolutely within the control of the State of Pennsylvania, all subject to your being able to build the works to take this water into the city of Philadelphia filter it and deliver it according to our programme at a pressure practically twice what it now is.

"It is going to do more than that, gentlemen. If you will go ahead in connection with our recommended programme for meterage, that is, if you put in meters, and cut down the consumption as regards needless waste—not water you really need for your household purposes or industrials plants—you will be able to get along with this average supply of 300,000,000 gallons and in the dryest weather some 260,000,000 gallons, and if you are able to do that, at the end of six or eight years, you will be able to get along with practically no water from the Delaware at Torresdale.

Situation in Ten Years

"If you will go ahead with this programme you will find that at the end of ten, fifteen or twenty years a situation whereby you will be using no water from these local rivers. You will be using upland water under all ordinary circumstances. Perhaps at times it may be necessary to get some slight amount of the Torresdale water, but that can be let in in the proper manner, and you will not be hurting people in the northeastern section, or in any district, as regards that particular district from Torresdale. You have got to live with this situation for six or eight years anyway. Then you will get to the time, with this Perkiomen and Tohickon supply, when you will have some 300,000,000 of an average consumption taken from six or seven reservoirs, holding over 100,000,000,000 gallons.

"Then, what are you going to do? You are not going to have a needless waste of water. You will keep that in check by the meters. You are then going to look at a situation as regards the Delaware River, not shown by the facts in 1922 or 1923, but by the facts which you will then have before you. Then you will be able to see what the situation is with respect to the pollution of water on the Delaware above Trenton, at Yardley perhaps, with its pollution coming from the Lehigh Valley, and other districts.

Will Have Stabilized Programme

"But then you will have a stabilized programme in all probability, with regard to the flow on the Upper Delaware incident to reservoirs connected with this great development, and other things. You will have your interstate agreement between New Jersey and Pennsylvania stabilized then at that time. You want to bear in mind that you are not then under any necessity, through any word of this commission, you want to keep in mind that you are not going to be tied up for all time to your Torresdale supply from the Delaware. That is not so.

"Go ahead and develop your Perkiomen and your Tohickon, and ten or twenty years from now you will be able to look at the situation squarely in the face. If you then want to go to the upper Delaware, or the upper Tohickon, you can do it, but don't forget this, that if you are going to get away from the local rivers, you want to begin. That has been the trouble with Philadelphia for quite a number of years, at least fifty years. It wanted to get away from the local rivers, and go to their upland supplies. If you want to do that, you have got to make a beginning, and the best beginning you can make, gentlemen, is to start in with the Perkiomen and the Tohickon."

Councilman W. Roper was the first questioner to take Mr. Fuller in hand. His queries developed the assertion by Fuller—and he, in that respect spoke for the whole commission, that in some seasons, the Delaware at Yardley will not deliver a volume sufficient to satisfy the city's needs when New Jersey's share of the water is deducted and allowance made for the navigability of what remains of the Delaware.

Mr. Roper: What do you estimate the cost for the pumping that would be necessary from the Delaware to bring that up to Philadelphia?

Mr. Roper: Yes.

Mr. Fuller: Practically $76,000,000. But you wouldn't get the pressure and you lose view of the legal expenses.

Mr. Roper: Let us get first the other. Seventy-six million dollars would be the additional charges without the pressure?

Mr. Fuller: Yes.

Mr. Roper: Let us eliminate the pressure for a minute. We are agreed that we could get 500,000,000 gallons a day from Neshaminy-Delaware at a cost of $75,000,000 and then the additional charge would be $15,000,000 for a pumping plant.

Mr. Hall: How can you get the 500,000,000 gallons a day when he tells you he cannot agree on anything outside of Neshaminy.

Mr. Roper: What I am not clear on in my mind—there is no doubt the Perkiomen water is best, and it seems to be conceded the Perkiomen will only give us part supply. In the report which your commission made in 1920 you said the Perkiomen and Neshaminy, from a layman's standpoint, were about equal.

Mr. Fuller: You mean Neshaminy itself without any Yardley water.

Mr. Roper: Yes, was as good as the Perkiomen.

Mr. Fuller: About the same class.

Mr. Roper: Now the Yardley water would not probably be as good as Perkiomen.

Mr. Fuller: Nowhere near.

Mr. Roper: But it will be much better than the present Torresdale water.

Mr. Fuller: Yes, but not so much better than the Torresdale will be in a few years.

Mr. Roper: But it will be better than the present Delaware water.

Mr. Fuller: Yes.

Mr. Roper: Now it is possible to get a total supply for the City of Philadelphia from Neshaminy and Yardley.

Mr. Fuller: Yes, from an engineering point of view, but from a legal standpoint it is a question whether you will be allowed to take that much water.

Mr. Roper: Whether New Jersey would claim we had no right to divert that much.

Mr. Fuller: That is the idea.

Mr. Roper: But it is possible to get an adequate supply for Philadelphia for fifty years from the Neshaminy-Yardley project.

Mr. Fuller: From an engineering standpoint, but I don't think you could get it without a great deal of expense for building compensating dams up in the mountains and bringing the water down for New Jersey.

Perkiomen Supply Inadequate

Mr. Roper: It is not possible to get from the Perkiomen a supply for fifty years. You will agree to that.

Mr. Fuller: Yes.

Mr. Roper: And therefore it comes to the question of cost. The Perkiomen cost for part supply is $90,000,000.

Mr. Fuller: Yes.

Mr. Roper: The Neshaminy, whole supply for the entire city, is $75,000,000 plus interest charges on $15,000,000.

Mr. Fuller: But leaving out of the view the fact that you are not bringing the pressure up to the same extent you are going to get here in the heart of the city.

Hall Offers Explanation

Mr. Hall: I was going to add, Mr. Roper wanted to bring out that you could get for $76,000,000, 500,000,000 gallons a day. Mr. Fuller very properly says from an engineering viewpoint yes, but legally there is a doubt as to what they can take out of the Delaware, and therefore, until that legal doubt is settled there could be no figures upon that basis. I would like also to ask if it is not true, Mr. Chairman, that in this cost of $91,000,000 if $20,000,000 of it is not for the equalizer to bring this pressure down, and you could have the Perkiomen-Tohickon supply and eliminate that part of it and save that twenty million.

Mr. Fuller: Yes.

Mr. Hall: And on the Neshaminy, if you wanted that you would have $20,000,000 on top of the $76,000,000?

These are the things I feel are essential to be brought out and my main purpose in asking Mr. Fuller whether we were going to get 225,000,000 gallons a day from Perkiomen-Tohickon for $56,000,000, why it was $91,000,000 today. Now we know that $20,000,000 of that is a new idea in putting up there in Montgomery county an equalizing basin.

Mr. Crossan: Would you give the committee some idea, Mr. Fuller, of the attachment areas on the Perkiomen-Tohickon district as compared with the Neshaminy-Delaware source of supply.

Mr. Fuller: The Perkiomen total would be 307 square miles, and in the other basin, 162 square miles above the upper dam and then there is 53 square miles between the upper and the lower dams, so the total is 215 square miles as against 307.

Mr. Crossan: Have you any estimates in your commission data as to the cost of these attachments?

Mr. Fuller: They are included in this $91,000,000.

Mr. Crossan: That includes the purchase of the land the purchase of all water rights and consequential damages, all you can estimate.

Mr. Fuller: Yet.

Torresdale Intake Removal Hinted

Mr. Crossan: I am only speaking now as a man who lives in the district affected by the Torresdale plant and we are here to get the facts. Is there any reason why the Torresdale intake should be at Torresdale?

Mr. Fuller: Do you mean as compared with taking it upstream?

Mr. Crossan: Either up or down. If you took it down, would it make matters worse? Suppose you took it down to Front and Chestnut?

Mr. Fuller: It would not help any.

Mr. Crossan: Would it make it worse?

Mr. Fuller: Yes, I think it would.

Mr. Crossan: Suppose you took it up; would that make it better?

Mr. Fuller: It is very debatable whether it would make it better to an extent worth its cost.

Mr. Crossan: I am really speaking, Mr. Fuller, in the future in asking that question; that is, when the sewage disposal plants are completed, I have in mind, not today. I mean, will the character of Delaware water, upon the completion of those sewage disposal plants, be practically the same at Front and Chestnut as it will be at the County Line, say at Bristol?

Mr. Fuller: No, I think that the water at Bristol will be somewhat better.

Mr. Crossan: Then, in other words, above Trenton it will be still better?

Mr. Fuller: It is possible, but let me make plain that the float observations show that from Front and Chestnut there are no floats go up as far as Torresdale. Lehigh avenue is the southerly limit at which they have found that floats would move in the vicinity of Torresdale.

Mr. Fuller: That is, for instance, the sewage at South street, which is a very noticeable point of flow of sewage—that does not touch the Torresdale inlet?

Mr. Fuller: It will go several miles. I have not clearly in mind, but I have this as a distinct recollection, that Lehigh avenue is the point furthest south from which you could get floats to get to Torresdale.

Mr. Crossan: That is, nothing below Lehigh avenue will touch the Torresdale intake?

Mr. Fuller: That is right.

Sewage Disposal Explained

Mr. Crossan: I have no engineering knowledge on this subject, and this is a little bit in advance of what we are talking about. Will you explain the operation of a sewage disposal plant? What does the sewage disposal plant do to the sewage?

Mr. Fuller: It takes out some 90 per cent. of those matters which can be deposited.

Mr. Crossan: It does not touch the liquids, does it?

Mr. Fuller: Practically not the liquids, no.

Mr. Crossan: The liquids all run back into the river, just as they come through the flow?

Mr. Fuller: Yes. It takes out about 90 per cent. The bacterial removal and solid matter are practically the same.

Mr. Crossan: That is, with the solids go 90 per cent. of the bacterial matter?

Mr. Fuller: Yes, sir.

Davis Not Cross Examined

Former Chief of the Water Bureau Carleton E. Davis was not cross examined. His statement covered all phases of the problem.

"I find," he said, "that the plan of the commission leads the way for getting in an external source of supply. The Perkiomen and the Tohickon, as has already been said, are external sources. They are practically unpolluted at the present time and they are under the control of the State Board of Health, which practically means that the State, having the interests of its largest city at heart, will see that those watersheds are not polluted.

"The alternative scheme, as I take it, does not lead to that end. It means a measure of dependence upon the Delaware River above Trenton, as an alternative for the present dependence upon the Schuylkill River and the Delaware River within the city limits. The adoption of the scheme of the major pumping from Yardley, it seems to me, commits the city for practically all time to water from that source, without any way open to dispose of that source and dispense with it, if such a course becomes necessarry in the future.

Commission Plan Favored

"To my mind the Delaware River at Yardley and the Delaware River at Torresdale, and the Schuylkill River, is really a matter of degree. I think there has been some confusion of thought in speaking of the Delaware River at Yardley as the upper Delaware. Of course, it is above Trenton. But it is by no means the upper Delaware, that the majority of us conceive when we use that term, meaning the upper branches of the Lehigh River above the coal mines or the Delaware River at the Water Gap, or the tributaries to the Delaware River at that point. The Delaware River at Yardley means, of course, the Delaware River as it is after receiving the discharge from the Lehigh River at the [illegible] mines on that river and the output of these cities, Allentown and Bethlehem.

"I think we ought to look at the problem on these broad major lines that the plan of the commission presents a scheme and shows the way of getting away ultimately from the local rivers, if that becomes necessary with all the drawbacks that the [illegible] rivers might have."

Mayor Upholds Commission

After the hearing, Mayor Kendrick and members of the Water Commission met with a few members of Council met in the Mayor's office. The Mayor gave out the following statement as a result of that conference:

"As Mayor of the city, I will not make any statement officially in regard to the new water project until I have had opportunity to make a study of the report of this afternoon's meeting.

"My hope is to have selected the source best suited to serve the city's needs. Personally, and as a citizen, it appears to me that the commission satisfactorily answered all questions and inquiries made at today's meeting, and further explained that it was not their purpose to commit the City of Philadelphia to the Torresdale intake for the next fifty years, or for any definite period.

"Mr. Carlton E. Davis, former chief of the Water Bureau for a period of more than ten years, was impressive in his support of the commission's recommendation, and altogether, I was pleased with the open and impartial manner in which the meeting was conducted."