Presenter - Neil Sardiñas Contributors - Sandy Sorlien, Rick Bates, Dave Montalvo, Jim Brazel, Chari Towne, Don Herbert, Scott Sibley, Steve Reilly, Tina Smith, Gerri Vattimo, MaryAnn Ahearn, Paul Salamy, Cathy Hranek, Perry Hamilton, Tina Garzillo, Jerry Recupido, Amanda Lafty, Kurt Bell, Sue Bradley and Lydia Dan.





Through the first half of the 20th^w century, coal mining in the upper Schuylkill River watershed dumped two million cubic yards of coal silt into the river annually, compromising the public drinking water supply, hindering navigation, and exacerbating flooding.

In the 1940s, James Duff, Attorney General of Pennsylvania, championed an Impounding Basin 21 / North Valley Forge initiative to halt the dumping of coal silt into the Schuylkill River and restore its waters. As governor in 1947, Duff advanced the cleanup project.

> The Commonwealth of Pennsylvania constructed a series of basins between Auburn and Norristown to contain dredged material from the river. Silt and culm (fine pieces of coal) settled in the basins while the water drained back into the river. This dredging process removed over twenty million cubic yards of coal material from the river.

AMERICA'S FIRST

RIVER CLEANUP

.940 Map - Reading Area Community College Schuylkill Navigation Digital Collection SNC Engineers' Records PADEP

In 2001, Upper Merion Township acquired basins 23 & 24. Stoudt's Ferry Preparation Company purchased the impounded coal waste to resell as coal products. The basins were backfilled with material excavated from nearby highway projects. Heuser (HOY-zer) and Bob Case Parks were built on these sites. The earthen ridge in front of you is part of Basin 23's embankment.

Bob Ca

Extracting salable coal from Basin 23.

A waste weir permits only surface

Heuser Par

Schuylkill River Dredge

Dredged slurry discharges into basin.

Coal waste settles to the bottom.

ACRES

Schuffkill Navigation CompanyEngineers: Records - PADEP Schuyfkill River Sedment Map

03 Schuylkill River Project V38

Upper Merion History Signs ing Backstory: What's culm? culm¹, n. So culmi'l eu'lminan long heavenly body Iminat lit. & fig.

Answer: Coal-dust (esp. of anthracite). It looks like fine black sand.

ATTE Data Curri 2,440 CO. 100

This is the North Abrams area today centered at the confluence of Trout Creek and the Schuylkill River.

Schuylkill River

O

Trout

Valley

Beidler Road







SILT IMPOUNDING BASIN Nº 23 North Abrams



A 1928 photo from the Philadelphia Water Dept shows men removing culm in front of Outlet Lock 65 on the Norristown Canal in Bridgeport. "Norristown Canal" was the name of the canal in Bridgeport.

Lock 65 Bridgeport

Visible in the background of the previous photograph is the crenelated tower of Christ Church (Old Swedes).



Lock 65 Bridgeport



Also visible is the Pennsylvania Railroad's Trenton Cut-Off Bridge spanning the Schuylkill River in Swedesburg, PA.

Lock 65 Bridgeport

CONTRACTOR DECEMBER OF A

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The upper photo of the Norristown Canal is looking downstream under the Philadelphia and Western Bridge in Bridgeport. The DeKalb Pike bridge over the canal is visible in the distance. Both photos show the accumulation of culm.

0

BRIDGEPORT CANAL - LOWER END OF MARCH PACKING CO. **1928 Bridgeport**

75 Years go, the Schuylkill River was the site of America's First river cleanup.



This is the Heuser trailhead. The Schuylkill River West Trail cuts through Impounding Basin #23's wall. Impounding basins were an important part of the cleanup.

What was there culm in Upper Merion? We are nowhere near the coal mines.

Publ. by P. H. Loeper, Ashland Pa.

start to work next wel

Hammond Breaker, Girardville Pa.

lorng to

141

Eastern

Field

SCOULD FOR THE SCOULD

Middle Coal

Phila

Northern Coal Field The Coal Region of Northeastern Pennsylvania has the largest known deposits of anthracite coal in the world with an estimated reserve of seven billion tons. Pennsylvania's four anthracite coalfields are labeled on this map.

Western Middle Coal Field

Southern Coal Field

Upper Merion History Signs Years of mining and

Years of mining and processing anthracite in the Schuylkill watershed resulted in an extremely fouled river.

Anthracite Mining & Processing

These barges are Schuylkill River dredges shown working near Royersford. Their function was to loosen the culm deposits and pump the slurry into the impoundment basins.



The dredges were made specifically for the Schuylkill River Project. The dredges were designed so that all components exceeding a 13-foot clearance could be lowered to allow passage under a bridge at a draft of 4 feet. They were also designed to be easily disassembled so that they could be transported overland more easily.

reell

River

Phila

Schunks

LODGER LOOT L

The Southern Anthracite Field is the largest of the four anthracite coal fields in Pennsylvania. The upper reaches of the Schuylkill watershed are in the Southern Anthracite Field.

The Perkiomen watershed is separate from the entire anthracite region.

Balt

Upper Merion History SignsJune 8, 1950Schuvlkill RiverOaks

Oaks, PA - June 8, 1950 This is an aerial view above the confluence of the Schuylkill River and Perkiomen Creek. (Penn Pilot)

Sidenote: Oaks, PA is named for Thomas Oakes who was the chief engineer of the Schuylkill Navigation Company. He was responsible for the design and early construction of the Navigation's Schuylkill River canals in the early 19th century. Oakes was also instrumental in the design of the Fairmount Water Works in Philadelphia.

Valley Forge

Perkiomencreek

Schuwlkill River

Upper Merion History Signs June 8, 1950

Perkiomen Creek

Note the contrast in color between the Schuylkill and the Perkiomen. The lighter color of the Schuylkill is due the the culm deposits which the Perkiomen does not have.

Upper Merion History Signs June 8, 1950

Zooming in on the same aerial photo shows a working dredge and its pipeline.

Upper Merion History Signs June 9, 1950

Zooming in on this aerial photo shows another working dredge.

Schuylkill River

Norristown

Bridgeport

King of Prussia

Upper Merion History Signs June 9, 1950

Barbadoes Island

Schuylkill River

Upper Merion

Upper Merion History Signs June 9, 1950

This "island" is composed entirely of culm.

Z

The slurry from the dredge, composed of culm and river water, was pumped into basin.

Dredge Discharge

From the basin, the
water drained back
into the river
through a weir,
leaving the culm
behind. Weirs
allowed control of
the basin's water
level.

Waste Weir

on Memorial

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f Eastern

2019

Valley Forge Crossing Manufactured Home.

Valley Forge Park Rd

This is the North Valley Forge basin, across the river from Washington's Headquarters. The weir has removable gates and a hollow interior.

The photo to the left shows the North Valley Forge basins c1949. Water pumped in from a dredge would pool in the impoundment allowing the solids to settle. The water would be decanted or drained from the top of the pool, by the weir, and flow back to the river through a pipe.

PLATE 9-NORTH VALLEY FORGE IMPOUNDING BASIN-SHOWING COMPLETED EMBANKMENTS FOR UPPER AND LOWER BASINS AND WASTE WEIRS

> The weir in the 2019 color photo above is the same weir on the left edge of the B&W photo.

to three sizes. Usea with permission of the Stoudt's Ferry Preparation Company.



In 2001, Upper Merion Township acquired basins 23 & 24, and Stoudt's Ferry Preparation Company purchased the impounded coal waste to resell as coal products. (Page 121 from A River Again by Chari Towne.)

2004 photo showing Stoudt's Ferry Preparation Company excavating dredged sediments from the North Abrams impounding basin to reclaim marketable coal. Used with permission of the Stoudt's Ferry Preparation Company.

Stoudt's Ferry Preparation Company
recovers coal and other materials
from Schuylkill River culm. The
average amount of coal reclaimed
from dredged sediments is 30
 percent of the volume.
Some of the coal that came out of
Upper Merion's basins became an
 ingredient for Kingsford
 charcoal.

Stoudt's Ferry Preparation Co. - Oaks PA



2024

le!

Heuser (pronounced "hoy-zer") and Bob Case Parks had highway construction fill added after the culm was removed, reducing the depth of the basins.

Champ

W Beidler Rd

2024

#23 (Heuser Park)

#23

Heuser Darl

(Heuser Park)

The Trail Sign Project was conceived and directed by Upper Merion resident Neil Sardiñas, who also created the design for each of the signs.

Neil would like to thank Chari Towne, author of <u>A River Again: The Story of the</u> <u>Schuylkill River Project</u>, for her help with this sign.





A River Again Story of the Schuylkill River Project.

Chari Towne