

Blacklick Creek: The Death and Resurrection of a Watershed

Bureau of Abandoned Mine Reclamation
WV Mine Drainage Task Force Symposium
5/5/2026

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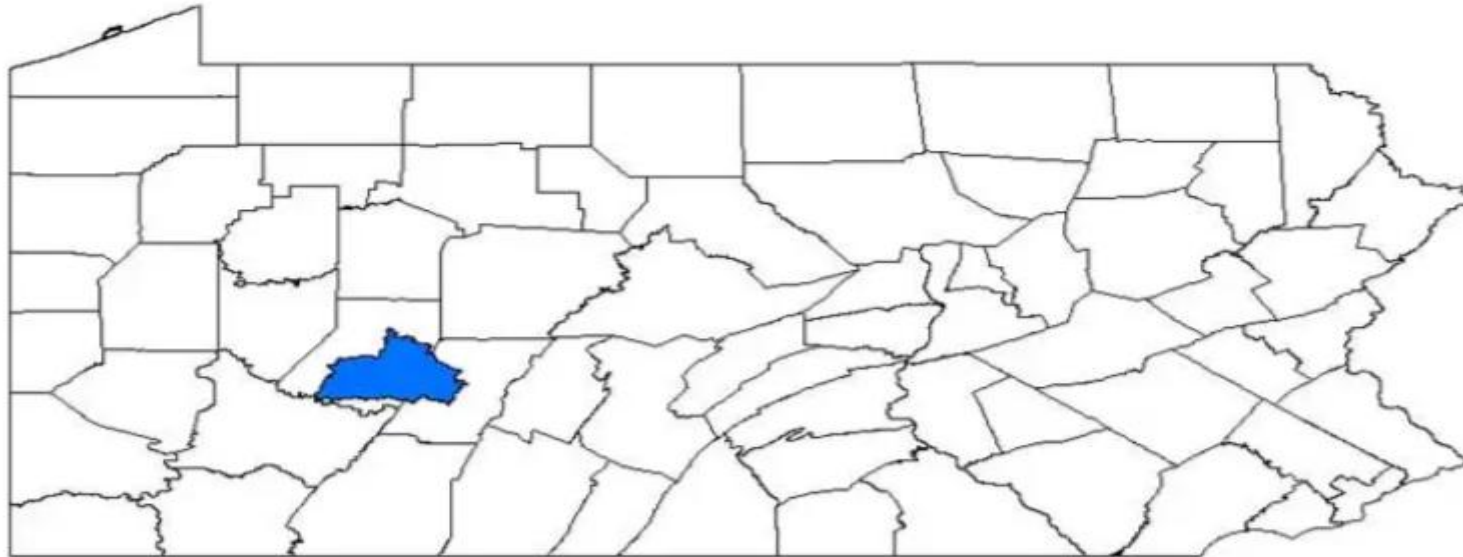
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Blacklick Creek – History

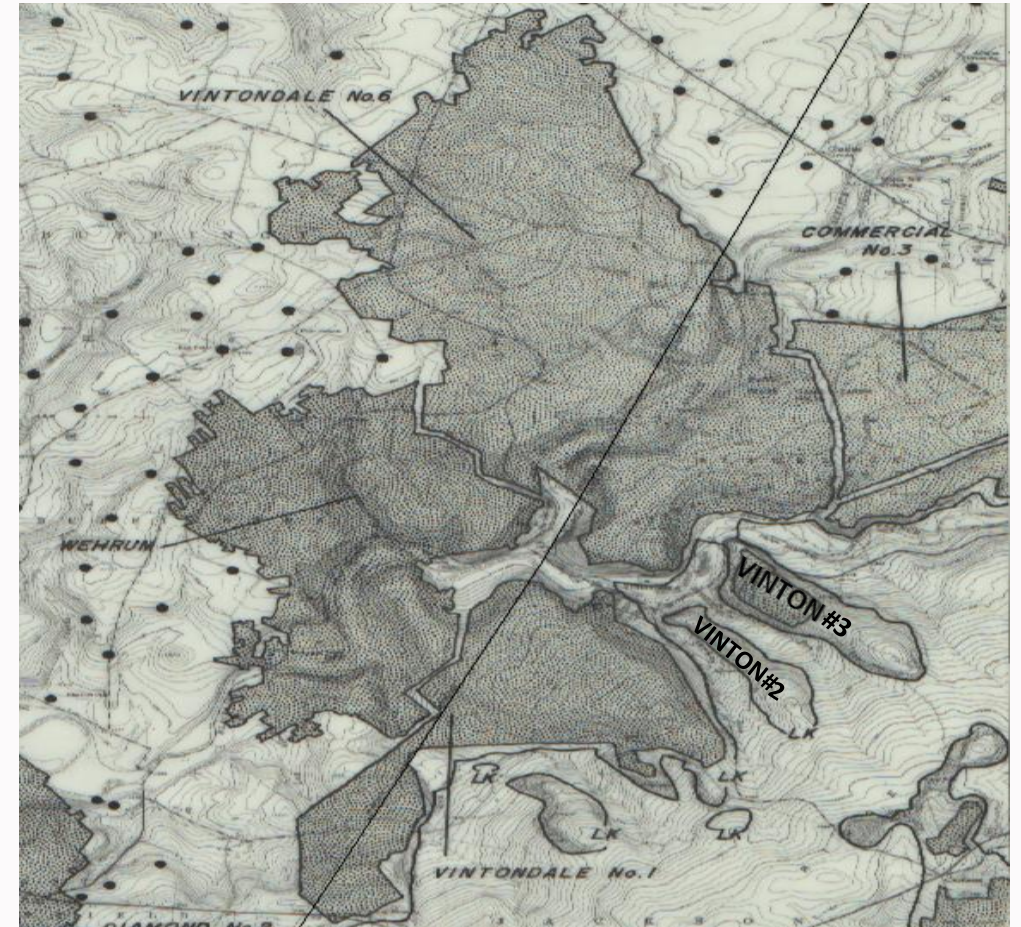
BLACKLICK CREEK WATERSHED LOCATION



Map courtesy of Blacklick Creek Watershed Association

Blacklick Creek – History

Coal basin formed by the Ligonier Syncline beneath Blacklick Creek – allowed for coal mine workings in the Lower Kittanning Coal Seam seven miles long by four miles wide (28 square miles)





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Blacklick Creek – History

“Nothing is more unfair than to judge the men of the past by the ideas of the present.”

Denys Arthur Winstanley 1912

Blacklick Creek – History

- Largely pristine wilderness prior to 1845
- Eliza Furnace 1845 - 1849 large tracts of forest cut for charcoal
- Speculation that the mainline of the PRR would follow the Blacklick
- Coal crops were identified and “discovered” around the same time
- With rough terrain and little population no major mining took place
- Area was largely left undeveloped with sporadic timbering and country bank mines until around 1890



Blacklick Creek – History

- 1890 – Judge Augustine Vinton Barker begins purchasing land and coal rights in the valley and starts the Vinton Lumber Company
- Early 1890s – Investors including Warren Delano III (maternal uncle of Franklin Delano Roosevelt) begin companies like the Blacklick Land Improvement Company and the Vinton Colliery Company
- Circa 1891-1893 – The Ebensburg and Blacklick Branch of the PRR extends to Vintondale (later became the Cambria and Indiana Railroad)
- July 1893 – Ground broken for the company town – Vintondale
- October 1894 – First coal was shipped from the Vinton #1 mine



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Blacklick Creek – History



Warren Delano III – Principal investor in coal mines in Black Lick Valley



Blacklick Creek – History

- 1901 – Lackawanna Coal and Coke Company formed; purchased the No. 1 and No. 2 Mines and No. 3 and No. 4 Mines open at Wehrum
- 1904 – Explosion killed four (4) miners in Wehrum Mines
- 1906 – Vinton #6 mine opened; bank of 152 coke ovens
- June 23, 1909 – Explosion killed 21 miners in Wehrum Mines
- 1917 – WWI increases coal and coke demand
- 1922 – Wehrum Mines were bought by Bethlehem Steel



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Blacklick Creek – History

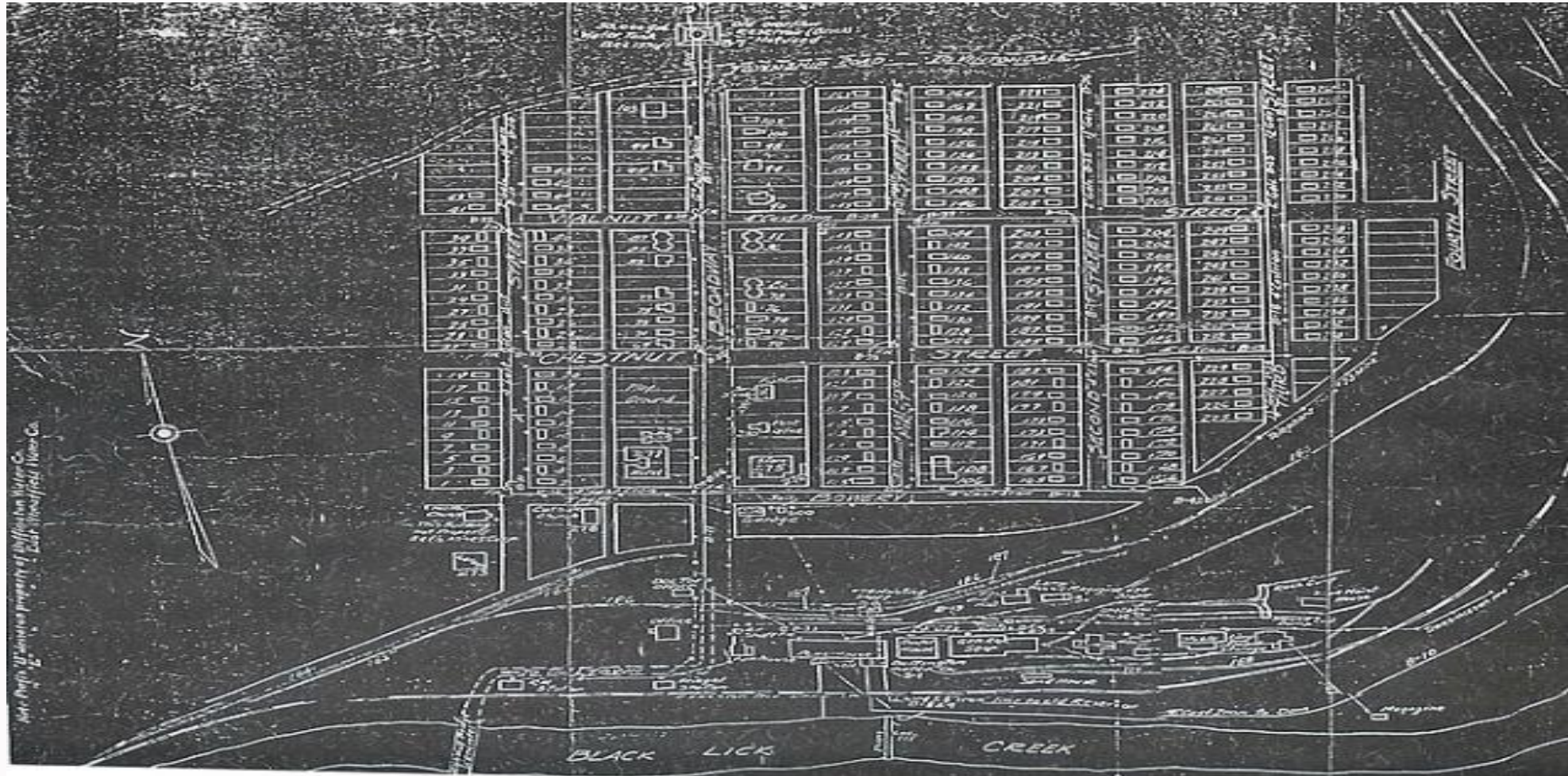


Henry Wehrum – General Manager of the Lackawanna Steel Company of Scranton,
parent company of Lackawanna Coal and Coke Company



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Blacklick Creek – History





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Blacklick Creek – History

Clarence Claghorn, first Superintendent for Vinton Colliery and Lackawanna Coal and Coke. He introduced an early version of the longwall mine to Vinton #3 and sections of the Wehrum mine. The method, while it maximized coal recovery, was slow and costly and was discontinued.





Blacklick Creek – History

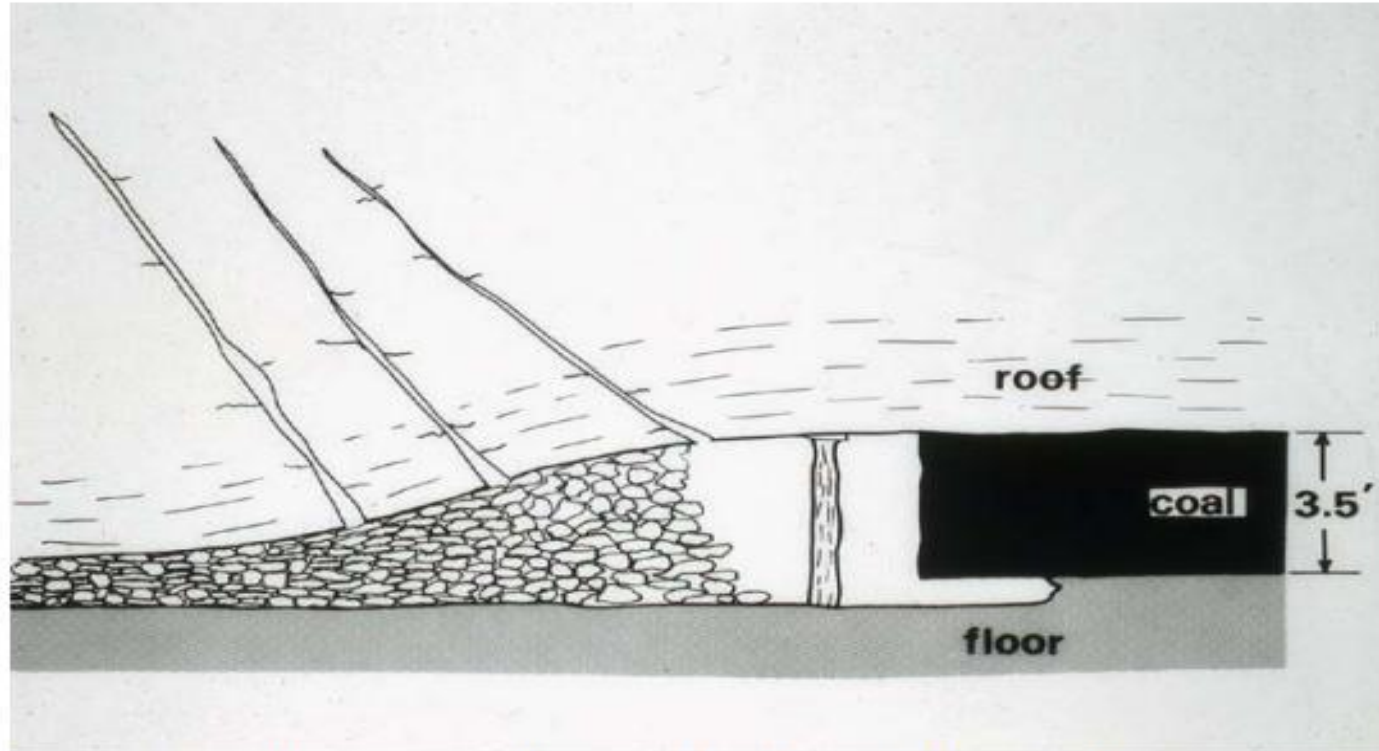


Figure 9a. Cross section diagrams at the outside edge of a longwall. Cross section from mine working face at right with undercutting and condition behind working face, back toward the mine shaft (Bauer 1984).



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Blacklick Creek – History



Vinton #1 Mine and Tipple



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Blacklick Creek – History



Vinton #6 Washery and Coke Ovens



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Blacklick Creek – History



Vinton #6 Washery and Coke Ovens



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Blacklick Creek – History



Vinton #6 Washery under construction



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Blacklick Creek – History





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Blacklick Creek – History



Battery of 152 coke ovens on the Vintondale “mine flat”

Blacklick Creek – History

Coal Companies owned and controlled the towns

More like a military base than a town...

- Vehemently anti-union operations
- All housing owned by the company
- Owned virtually all of the property (including the movie theatre and bars)
- Controlled the railroad in and out of town (and since the early roads were very poor, they knew who came and went)
- Miners had to buy all supplies from the company, paid the company for their food and rent
- Large immigrant work force. In 1920 census – 25 different languages listed as being spoken in Vintondale. Communication a barrier to organization
- During the 1922 UMW national strike, guard houses and search lights were at every entrance to town. Arthur Garfield Hays, general counsel for the ACLU was immediately arrested for trespass in May 1922



Blacklick Creek – History

ATTORNEY TO SUE COAL CO. ON CHARGES

New York Lawyer Makes Announcement Following Personal Investigation in Pennsylvania

SAYS VINTONDALE IS AN ARMED CAMP

New York, May 30.—Arthur Garfield Hays, New York attorney, who today announced his intention to sue the Pennsylvania coal fields for the purpose of the American Coal Laborers Union to test the power of the police and guards in the strike of the colliers, today announced through the union that he would bring suit against the Vinton Colliery Company in New York for assault, battery and false arrest.

Hays went to Vintondale, Pa., last week after announcing his intention to sue the company. He was alleged to have been arrested by the company's private police in Vintondale on the charge of obstructing justice, prohibiting open meeting and erecting a union.

He accomplished his mission, a spokesman from the union said. He with members of his party, were arrested soon after arriving at Vintondale, he claimed. In retaliation, Hays said, he caused the arrest of four of the private police, including their chief and three officials of the Vinton Colliery Company.

The civil liberties union announced that Hays would take action in behalf of the union, the United Mine Workers of America, and members of his investigating party, to obtain an injunction restraining coal operators and their police from interfering with agents of the borough of Vintondale and from breaking up proper meetings.

"Vintondale is an armed camp," Hays declared. "I followed a company with armed, uniformed, armed men of the Lockwood Legislative committee. Mr. Untermyer, he said, promised to cooperate in the war conditions in the Pennsylvania fields."

"Vintondale is no longer an American city," Hays continued. "The private police, mounted and heavily armed and acting under the directions of officials of the coal company permit no one to stand for a moment on the streets. They greet new arrivals with threats of arrest, obscene language and physical violence."

"No sooner had our party arrived in Vintondale than we were ridden down by armed guards who assaulted us and attempted to throw us bodily into the stream in which we had come. They said, 'You had up or we'll hunt you up.' We left the town to obtain warrants for their arrest and returned with necessities from the nearby town of Nesquehoning. We had identified the police, who assaulted us and the company officials who had given them orders, and I was on my way to the office of the peace, who held court in the company's office, when I was arrested on a charge of trespassing."

"I was seized by two troopers who confined me in a filthy cell for an hour. When I appeared before the justice of the peace he asked me if I was ready for trial. When I said, 'Yes,' he said, 'guilty. I fine you \$5.' He then announced he would suspend the fine if I left town at once."

"When I refused to leave and demanded a hearing the justice said the case was concluded. That I was not guilty and would not be fined, and he told the company guards to let me alone in the court room."

Poughkeepsie Eagle News - May 31, 1922

“I found Vintondale an armed camp”, declared Mr. Hays. “Vintondale is no longer an American city. The private police mounted and heavily armed and acting at the directions of officials of the coal company permit no one to stand for a moment on the streets. They greet new arrivals with threats of arrest, obscene language and physical violence.”



Arthur Garfield Hays

Source: Heinz History Center



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Blacklick Creek – History



Company “coal and iron” police in Vintondale



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Blacklick Creek – History

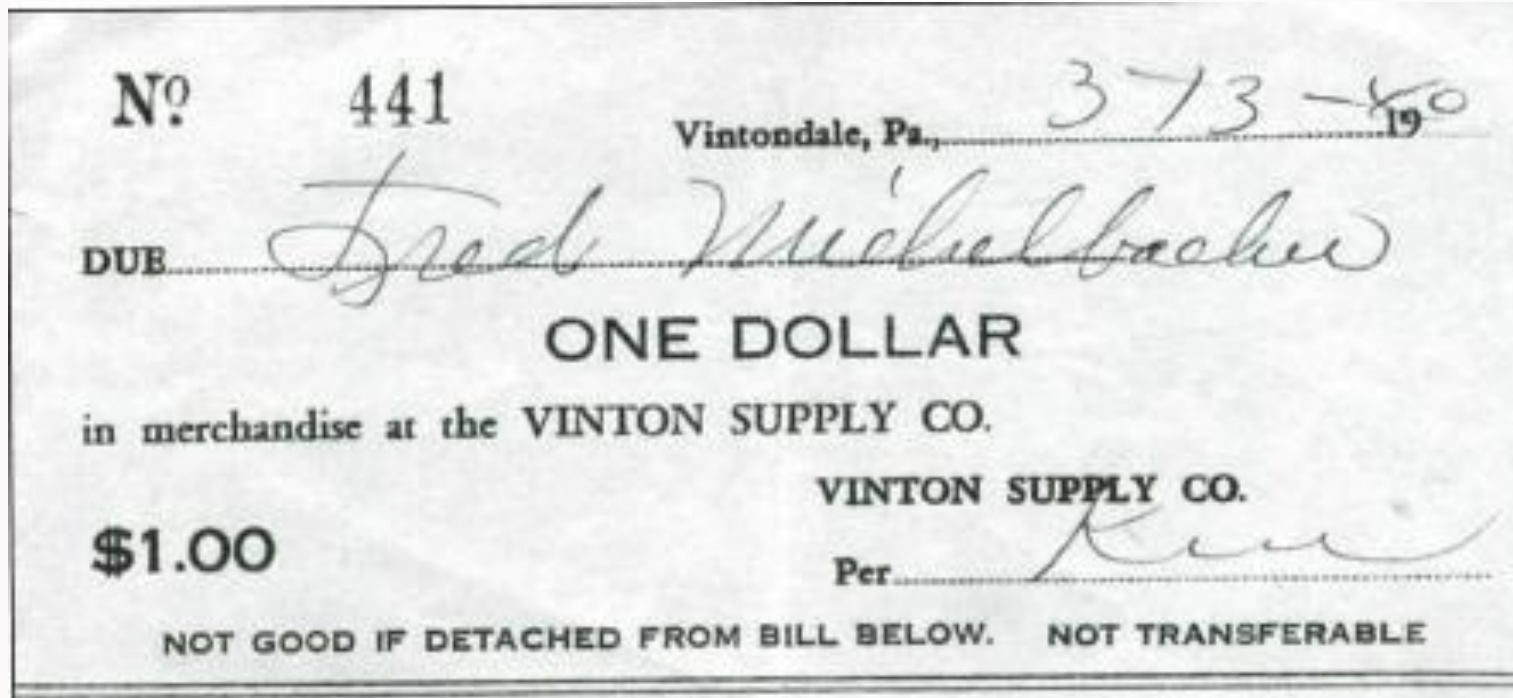


Company Store – burned January 16, 1943



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Blacklick Creek – History



Miners before unionization and labor laws, were paid in paper script good only in the Company Store

Blacklick Creek – History

- 1929 – Wehrum Mines close and are abandoned
- 1933 – UWMA Local 621 is formed as a result of FDR’s “New Deal”
- 1945 – Coal Washery in Vintondale burns effectively ending coke production
- 1948 – Vinton #1 closes
- 1957 – Vinton #6 mine sold in bankruptcy to Johnstown Coal and Coke and then later to Driscoll Coal Company
- 1968 – Vinton #6/Driscoll #4 ends production and the last mine is abandoned
- 1977 – Flooding washes out three (3) railroad bridges into the valley ending any rail service in the valley (although no major service had happened since 1960s)
- 1993 – Blacklick Creek Watershed Association is formed
- 1994 – “Three Sisters” relief boreholes drilled in the North Branch Blacklick Creek



Blacklick Creek – History

The Busy Blacklick Valley

A Section of Earth Whose Industries Are Bound to Cut a Considerable Figure

The following article comes from the **January 29, 1904** issue of *The Weekly Tribune* from Johnstown, Pa.

by Charles Hasson, Weekly Tribune Staff Correspondent

Ebensburg, Jan. 23 – Few people who have not been in the Blacklick Valley recently would be able to recognize the wilderness that it was a few years ago. Prior to 1893, when the Pennsylvania Railroad Company extended the Ebensburg & Cresson Branch to Vintondale, the country which the road traverses was wild mountain land. No effort had been made to till the soil along the Blacklick and miles and miles could be traveled without seeing a single habitation. The extension of the railroad, as if by magic, transformed the valley into live, hustling communities and busy hives of industry. Sawmills were created to turn the giant trees of the forest into lumber. Many coal mines were opened, so that the Blacklick region might yield up its vast mineral wealth to the busy mills and factories of the East. New towns and villages sprung up, as if by the magician's wand, to house and care for the many workmen and artisans who found employment among its inhospitable hills.

To-day thousands of tons of coal are being shipped from this prosperous valley, the people are happy and contented, and no more promising coal region exists in Pennsylvania. And it is only in its infancy.



Blacklick Creek – History

R. I. 3102.

Table 1.- Samples from Black Lick Creek
(Acidity in parts per million; volume in gallons per minute).

Location (fig. 1)	Total acidity	Free acidity	Volume
20) Near headwaters, South Branch	696	317	180
21) Near Twin Rocks	1100	710	12,500
22) Bridge at Vintondale	1265	480	-
23) North Branch at Vintondale	1115	493	12,000
24) Bridge at Wehrum	1150	405	¹ Not measured
25) Bridge at Dilltown	1210	430	do
26) Bridge at Route 56	1075	405	do
27) Near Black Lick and mouth	810	405	do

¹ - From sample 24 on, the stream volume, even at low water, was too great for accurate measurement by method used.

U.S. Bureau of Mines, Low Flow Acidity Study, published July 1931

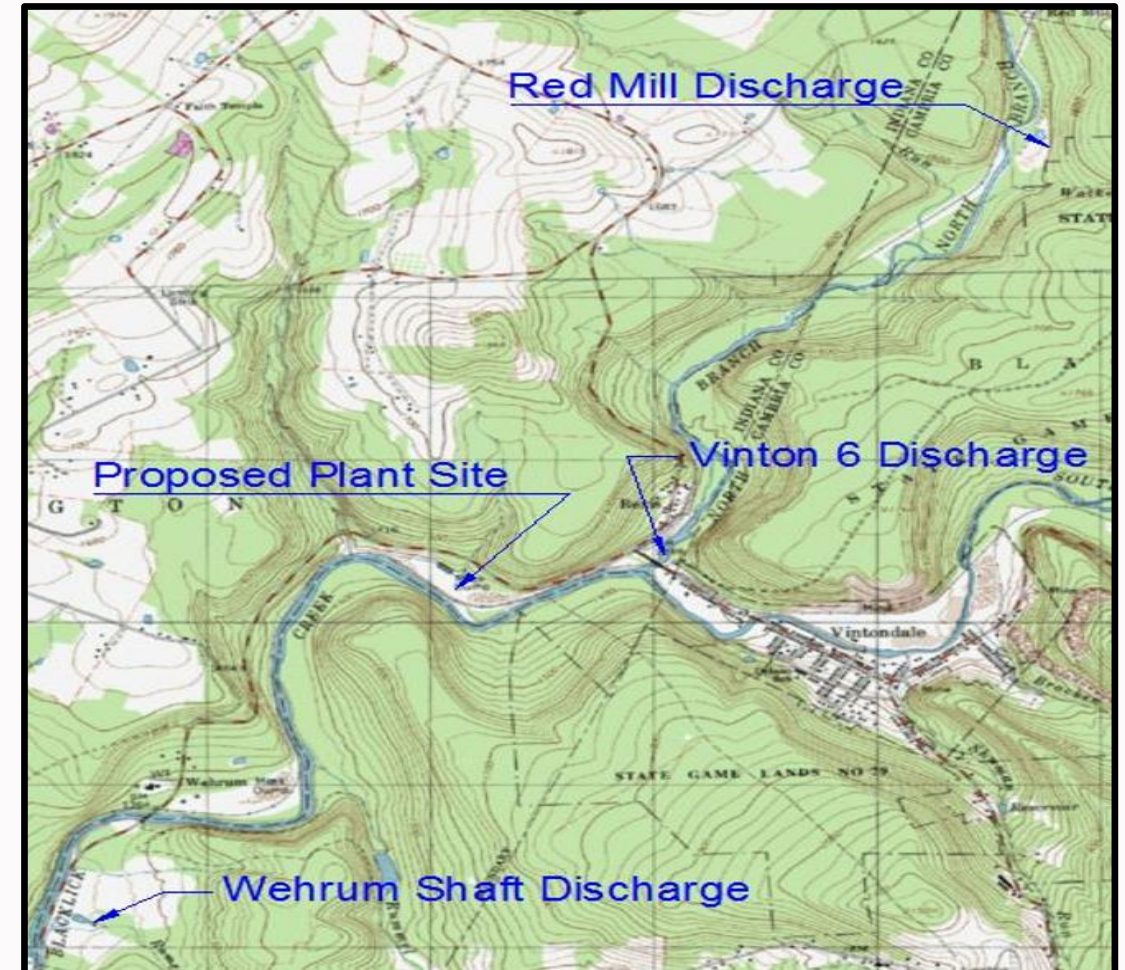
Mine Discharges

Three Major Abandoned Mine Discharges

- Red Mill Discharge (Commercial No. 16)
- Vinton No. 6 Discharge
- Wehrum Shaft Discharge

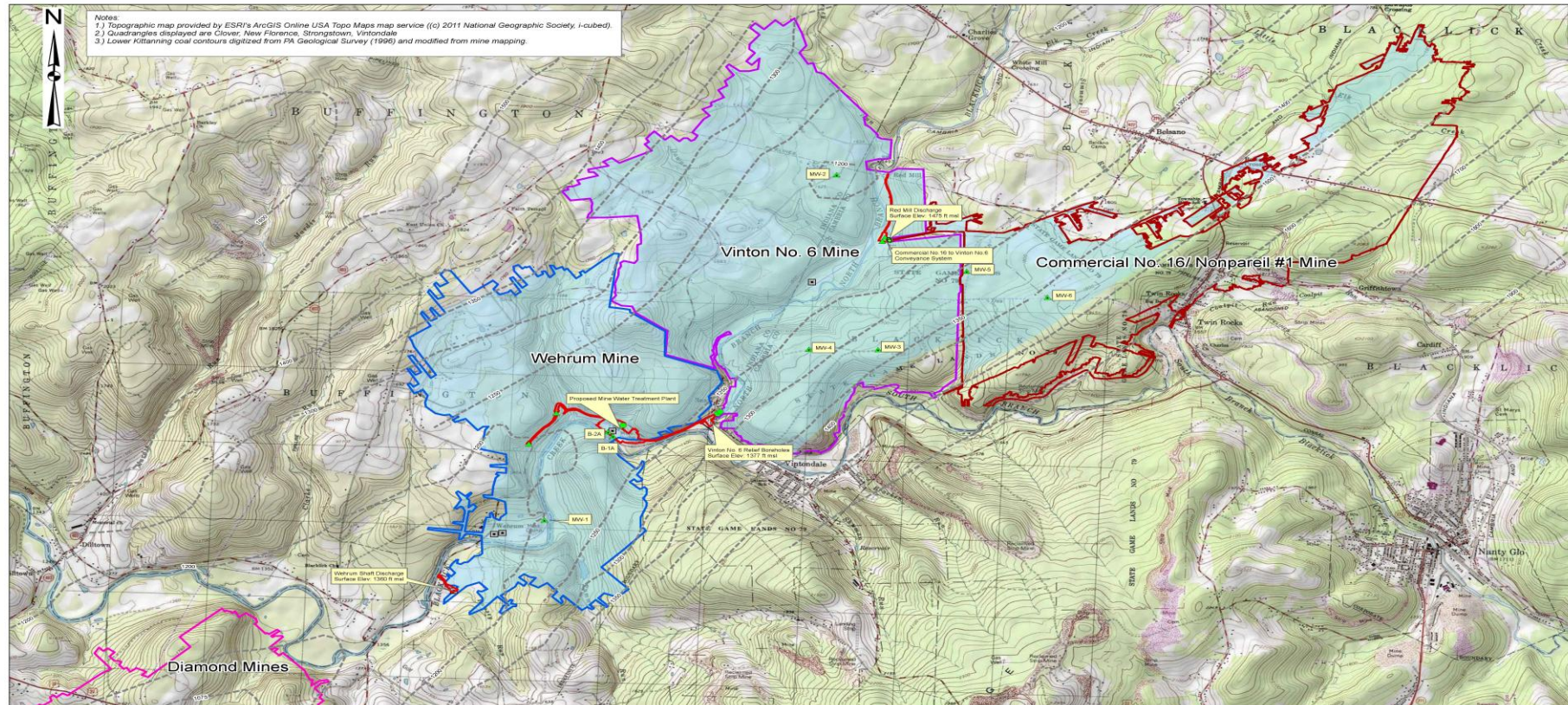
Receiving Streams

- North Branch of Blacklick Creek
- Blacklick Creek (Main Stem)





Mine Pool Map



 TETRA TECH <small>complex world CLEAR SOLUTIONS</small> 661 ANDERSEN DRIVE - FOSTER PLAZA 7 PITTSBURGH, PA 15220 T: (412) 921-7090 F: (412) 921-4040	 pennsylvania <small>DEPARTMENT OF ENVIRONMENTAL PROTECTION</small>	Legend <ul style="list-style-type: none"> ▲ PADEP_MW_2016 --- Lower Kittanning Bottom of Coal Elevation ● Proposed Mine Water Extraction ● Proposed Mine Water/Sludge Injection ■ Project Areas □ Approx. Extent of Mine Pool 	Date: February 2, 2021 Project No.: 112C07166 Drawn by: HAT Checked by: TAG	Scale: 1 inch = 1,500 feet 	BUREAU OF CONSERVATION AND RESTORATION BLACKLICK CREEK TREATMENT FACILITY <small>BLACKLICK, BUFFINGTON, & EAST WHEATFIELD TOWNSHIPS CAMBRIA & INDIANA COUNTIES</small> Task No. AMD 32(2246)101.1 PROJECT LOCATION MAP
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FIGURE B-1

PADEP: B:\Data\GIS\Map Files - Tom Gray\PADEP\BOM Programs\Blacklick Creek AMD Facility 112C07166\Blacklick Project site.mxd

Red Mill Discharge (Commercial No. 16)



Average Flow = 744 GPM



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Red Mill Discharge (Commercial No. 16)



Downstream of Redmill
Discharge & Refuse Pile
(February 2023)



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Vinton No. 6 Discharge



Average Flow = 1,080 GPM



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Vinton No. 6 Discharge

Vinton No. 6 Discharge Location
(February 2023)





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Wehrum Shaft Discharge



Average Flow = 711 GPM



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Wehrum Shaft Discharge





Mine Discharge Pollution

Pollution Loading to be Removed (lbs/day)

	Acidity	Aluminum	Iron	Manganese
Red Mill	1,532	72	484	17
Vinton No. 6	5,423	42	3,098	30
Wehrum Shaft	1,832	146	416	13



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Blacklick Creek at Treatment Plant

Blacklick Treatment Plant Location
(November 2022)





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Centralized Mine Drainage Treatment Facility



Design Flow = 5,000 GPM (7.2 MGD) Average Annual Flow = 2,800 GPM

Red Mill Discharge (Commercial No. 16)



Mine Drain Collection System
Two, 10-Inch PVC Pipes; Depth = 240 feet





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Vinton No. 6 Extraction Wells



Depth = 120 Feet; 125 HP Pumps

Design Capacity = 2,100 GPM with Variable Frequency Drive

Wehrum Extraction Wells



Depth = 200 Feet; 40 HP Pumps

Design Capacity = 700 GPM with Variable Frequency Drive



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Blend Tank



Volume = 25,200 Gallons (17.5' Diameter x 15.5' High)
Agitator powered by 5 HP motor



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Maelstrom Oxidizers



Maelstrom (definition) – a powerful whirlpool
Size = 20' Long x 10' Wide x 5' High



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Maelstrom Oxidizers



Blower Units powered by 50 HP motors
Design Capacity = 3,600 cubic feet per minute



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Reaction Tanks



Volume = 76,600 Gallons (30' Diameter x 16' High)
Agitators powered by 20 HP motors



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Lime Silo



Total Height = 70'

Lime Volume = 120 Tons (14' Diameter x 50' High)



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Lime Silo



750 Gallon High Density (30-35%) Lime Slurry Tank
Lime Usage Per Day (Approximate) = 5 Tons



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Valve Platform



Reaction Tank Valve Platform and Flume to Clarifiers



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Flocculating Clarifiers



Volume = 571,000 Gallons (90' Diameter x 13' High)
Rake Drives powered by 3 HP motors



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Flocculating Clarifiers





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Polishing Pond



Polishing Pond Volume = 1,570,000 Gallons
Service Water Tank Volume = 12,000 Gallons



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Constructed Wetland



Wetland Area = 1.25 Acres



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Discharge to Blacklick Creek





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Discharge to Blacklick Creek





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Off-Spec Pond



Off-Spec Pond Volume = 730,000 Gallons



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Control Building



Control Building Dimensions: 90' x 48'
Polymer System: 160 Gallon Tank, Three – 1 HP Pumps



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Control Building



Sludge Disposal: Four – 60 HP Pumps, 300 GPM
Sludge Recycle: Two – 5 HP Pumps, 150 GPM



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Sludge Disposal



Boreholes: Two – 10-Inch PVC Pipes; Depth = 270 Feet



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Garage



Garage Dimensions: 40' x 40'



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Ghost Town Trail



Restoration of 25 Stream Miles



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Blacklick Creek at Treatment Plant





Blacklick Creek at Treatment Plant

Average Combined Influent

pH	Total Iron (mg/L)	Ferrous Iron (mg/L)	Aluminum (mg/L)	Manganese (mg/L)	Acidity (mg/L)
4.89	119.0	118.6	9.4	1.9	270



Average Effluent

pH	Total Iron (mg/L)	Ferrous Iron (mg/L)	Aluminum (mg/L)	Manganese (mg/L)	Alkalinity (mg/L)
6.6	0.12	<0.30	<0.50	0.31	32.50

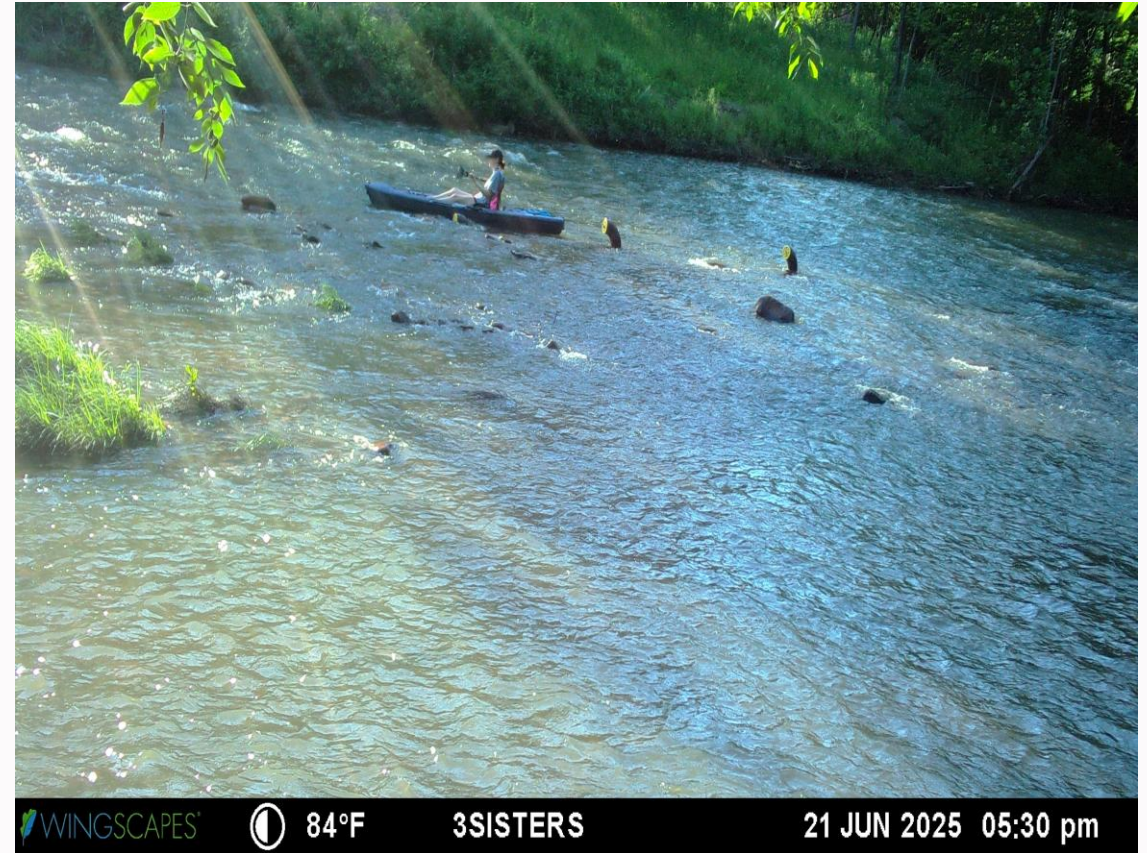
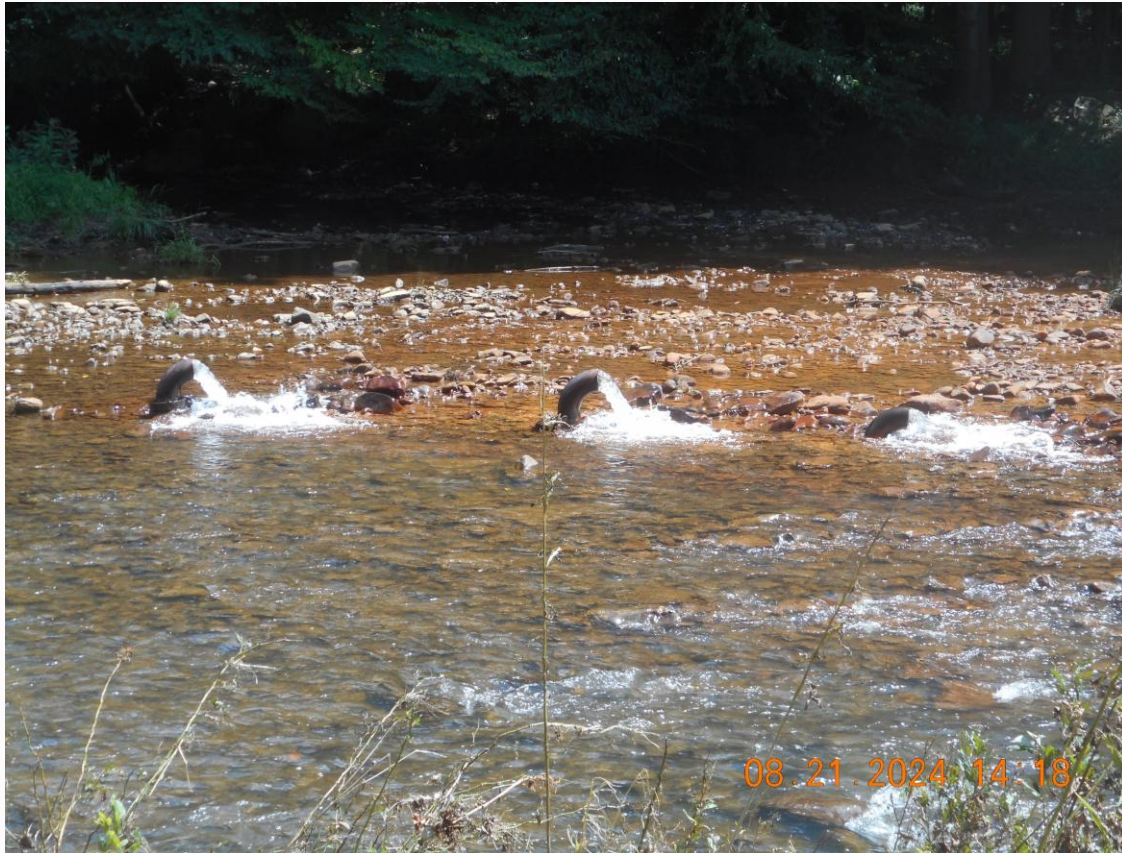


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Blacklick Creek at Wehrum Bridge



Blacklick Creek at Vinton No. 6 Discharge





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Estimated Economic Return on Investment

- Predicted Annual Cost of Operation (power, chemical, labor, maintenance, etc.) = \$675,000/year
- PA Fish and Boat Commission Use – CWF – Loss \$936,000 to \$1.3 Million
- Projected Use: Trout Stocked Fishery (TSF) – Use Rate: 1,100 trips/year/mile
- Lost Value: 25 miles x 1,100 trips/year/mile x \$100.22*/trip = **\$2,756,050 per year**
- Total Net Gain = \$2,081,050/yr ***just from water-based recreation***

*PFBC 2007 adjusted for inflation



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Project Information

- Contractor: HRI, Inc.
- Bid Opening Date: January 27, 2022
- Construction Start Date: June 20, 2022
- Contract Expiration Date: July 31, 2025
- Contract Bid Price: \$26,158,499.00
- Current Contract Amount: \$29,057,751.09
- Funding: AMD Set-Aside, AMLER Program Funds and Pennsylvania Capital Budget Funds



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Project Partners

- Blacklick Creek Watershed Association
- Blacklick Valley Municipal Authority
- Cambria County Conservation District
- Cambria County Conservation and Recreation Authority
- C&I Trail Council
- Foundation for Pennsylvania Watersheds
- HRI, Inc.



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Project Partners

- Indiana County Conservation District
- Indiana County Parks and Trails
- Office of Surface Mining Reclamation and Enforcement
- Tetra Tech, Inc.



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Project Partners

Property Owners

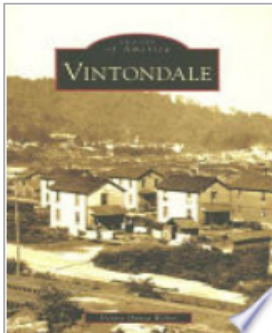
- Commonwealth of Pennsylvania
- Gaston Lumber
- Kovalchick Corporation
- Robin Gordon Leightley
- Carrie Gordon Mourey
- NER Timberlands, LLC
- Red Mill Rifle Club



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Primary Sources of Historical Information

Vintondale



[Denise Dusza Weber](#)

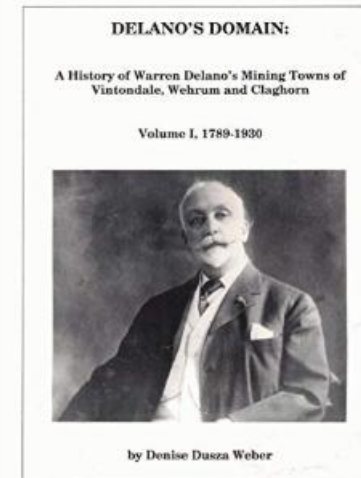
Arcadia Publishing, Jan 1, 2008 - [History](#) - 127 pages

Vintondale, located in Cambria County, holds a unique position in history. It was a coal-mining town with a notorious reputation based on an antiunion legacy that lasted until the New Deal. Warren Delano, maternal uncle of Pres. Franklin Delano Roosevelt, was the founder and owner of the company town. Through vintage photographs, Vintondale traces the areas history from when the first coal was shipped in 1894 until the No. 6 mine was closed in 1968. It includes such Vintondale claims to fame as the first long-wall mining operation, lawsuits by the fledgling American Civil Liberties Union in the 1920s, a 1940 Chapter 13 bankruptcy and reorganization, and a homegrown terrorist called Friend of a Friend. Today the sleepy borough belies its past as the center of the bustling Ghost Town Trail and as a recreation area.

Delano's Domain- A History of Warren Delano's Mining Towns of Vintondale, Wehrum and Claghorn 1789-1930

[Denise Dusza Weber](#)

A.G. Halldin Publishing Co., 1991
(currently out of print)





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Get In Touch

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The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water resources and to provide for the health and safety of its residents and visitors, consistent with the rights and duties established under the Environmental Rights Amendment (Article 1, Section 27 of the Pennsylvania Constitution).