

From Brine to Boom: The Salt Industry in West Virginia

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Educational Objectives

- Participants will be able to identify the major salt producing regions in West Virginia and describe the process of salt extraction.
- Participants will be able to explain the importance of the salt industry to the early development of West Virginia and discuss the social and environmental impacts of salt mining in West Virginia.
- Participants will be able to identify current salt mines and West Virginia's heritage within the salt industry.

Salt has held immense value throughout history, especially West Virginia's history. It was critically important as a first industry, then led to the development of coal mining. Essential for preserving food and vital for human and animal health, it has shaped economies and influenced the course of civilizations. This lesson will explore the fascinating story of salt production in West Virginia, including its geological origins, the ingenuity of its extraction methods, its importance to the state's formative years and its presence in the modern era.

The Geological Foundation

The story of West Virginia's salt begins millions of years ago, when an ancient ocean once covered what is now the Appalachian region. As the Earth's continents shifted and collided, seawater became trapped beneath layers of rock, gradually forming deep underground salt deposits. This natural history helps explain the presence of brine – salty water – that still surfaces in certain areas today. Long before European settlers arrived, animals and indigenous peoples discovered and made use of these salt sources. Natural salt licks, where mineral-rich water attracted wildlife, became essential sites for both survival and early resource gathering, setting the stage for the salt industry that would follow.

While salt licks and springs could be found across the region, West Virginia's most important historical salt production was concentrated



Genuine Kanawha Salt Bags from J.Q. Dickinson and Co., Malden, W.Va. Also bags of Charmco Feeds Screened Cracked Corn from the Charleston Milling Company, Charleston, W.Va. Photo source: wvhistoryonview.org/image/001421.jpg

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in a few key areas. The Kanawha Valley, especially around present-day Malden, became known as a major hub due to its natural springs with a high saline content, which made large-scale production efficient and profitable. Commercial salt operations first took root near the Great Buffalo Lick along the Kanawha River, turning the area into a thriving industrial center.

Another significant region for salt production was the Ohio River Valley, including the communities of Columbia, Hartford City and Mason City in Mason County. This area rose to prominence in the mid-19th century, aided by nearby coal resources and better access to western markets, which helped reduce fuel costs and boost output. Smaller saltworks also appeared in places like Bulltown and along the West Fork River, but their brine had a lower salinity, which kept them limited to more local significance

The Process of Salt Extraction Through History

Salt extraction methods in West Virginia evolved dramatically over time, reflecting both growing demand and technological progress. Early techniques were simple – settlers and indigenous peoples collected brine from natural salt licks and springs, then boiled it in large kettles over open fires to produce salt. As the industry expanded, shallow wells were dug near salt sources, often using hollowed-out tree trunks to access the brine below.

A breakthrough came in the early 1800s when deeper wells were successfully drilled by brothers, David and Joseph Ruffner. This unlocked a saltier brine and enabled much larger-scale production; these drilling innovations even laid groundwork for future oil exploration. Once extracted, the brine was evaporated in large flat pans, heated first by wood and later by coal, which became the dominant fuel as local forests were depleted. This shift to coal not only boosted salt production efficiency but also helped spark the early growth of West Virginia's coal industry.

It is important to note a contrast between the historical salt extraction methods and the practices of modern salt producers in West Virginia. Contemporary operations, such as J.Q. Dickinson Salt-Works, emphasize more sustainable methods, using solar evaporation to harvest salt from brine. This shift reflects a greater environmental awareness and a move away from the energy-intensive practices of the past.



Raking Salt Crystals with a Birch rake. Photo credit: jqdsalt.com/method-madness/

A Cornerstone of Development

The salt industry was instrumental in shaping early West Virginia, deeply influencing its economy, society and landscape. The availability of salt in the Kanawha Valley attracted settlers and helped establish thriving communities. Salt was essential for preserving food – particularly meat – which was vital for frontier survival. Beyond meeting local needs, West Virginia became a key supplier of salt to the livestock and agricultural processing industries. Much of the salt produced by then western Virginia was



used to preserve meat in major centers, such as Cincinnati, before being shipped westward.

Salt producers in the region also pioneered early forms of industrial cooperation, forming agreements to control production, stabilize prices and manage distribution – some of the earliest examples of business trusts. Salt well drilling laid the foundation for future industries, including oil and chemical production. Although the salt industry eventually declined due to shifting markets, competition and the impact of the Civil War, its legacy endured. The same resources and expertise that once fueled salt production helped transform the Kanawha Valley into a center of chemical manufacturing, ensuring the region’s continued industrial importance.

Heritage

While West Virginia’s salt industry, particularly in the 19th-century Kanawha Valley, played a crucial role in the state’s development, it also is marked by a dark history of reliance on enslaved labor. Many workers, including children, endured grueling conditions with long hours of unskilled labor. Most enslaved individuals were not owned by the salt producers, but leased from plantations in eastern Virginia, revealing the deep entanglement of the industry with the broader slave economy.

The salt industry’s rapid expansion and success were inextricably linked to the widespread use of enslaved labor. In 1850, Kanawha salt makers collectively employed over 1,500 enslaved individuals performing a wide array of demanding and dangerous tasks. By 1860, Kanawha County’s enslaved population numbered 2,184, with a concentration in the communities of Kanawha Salines and Charleston.

Environmentally, salt production had a lasting impact. Extensive deforestation occurred due to the need for wood to fuel brine-boiling furnaces, and land degradation likely resulted from widespread well drilling and industrial activity.



Shed, Smokestack and Grainer in Salt Camp Photo source: wvhistoryonview.org/image/001430.jpg

Though historical records are limited, brine disposal from saltworks likely posed risks of soil and water contamination.

A major environmental disruption occurred in 1861, when a flood devastated the Kanawha Valley, destroying many saltworks and halting production, which illustrated the industry’s vulnerability to natural disasters. The story of salt in West Virginia, then, is one of both economic growth and human and environmental cost.

Reflecting on West Virginia’s Salt Heritage

The history of salt extraction in West Virginia is a compelling narrative that spans centuries, from the use of natural salt licks by indigenous peoples and wildlife to the industrial boom of the 19th century and the modern-day revival of artisanal production. The industry was instrumental in the early development of the state, attracting settlers, fueling economic growth and fostering technological innovation. However, this progress came with social costs, most notably the reliance on enslaved labor and environmental consequences. Today, while large-scale salt production has shifted geographically and technologically, the legacy of this “salt of the earth” industry remains an integral part of West Virginia’s heritage, connecting its geological past to its present and shaping its identity.



Activities

Easy Salt Scrub Recipe

Ingredients:

- 1 cup sea salt (Dead Sea salt works great for its health benefits, but you can use any sea salt you prefer.)
- ¼ cup oil (Jojoba and sweet almond oils are great for skin, but you can substitute with almond oil, olive oil, avocado oil or melted coconut oil.)



Optional Add-ins for Extra Flare:

- Essential oils for fragrance (like lavender, eucalyptus or peppermint)
- A splash of honey for extra moisture
- Dried flowers or herbs for a decorative touch

Instructions:

Combine the sea salt and oil in a bowl until well-mixed. Adjust the amount of oil for a thicker or thinner consistency based on your preference.

If you're adding any optional ingredients (like essential oils or honey), mix them in now.

Transfer the scrub into a jar or container with a tight-fitting lid. Store in a cool, dry place and use within a few weeks.

Enjoy your refreshing, homemade salt scrub! It's perfect for exfoliating and moisturizing your skin.

Videos

- That Red Salt from Kanawha - The Archaeology Channel, accessed April 16, 2025, archaeologychannel.org/video-guide-summary/148-that-red-salt-from-kanawha
- The Salt Industry in West Virginia - YouTube, accessed April 16, 2025, youtube.com/watch?v=3urrPPzQ2Xs
- LITTLE LECTURES - "The History of Salt in the Kanawha Valley" by Nancy Bruns - YouTube, accessed April 16, 2025, youtube.com/watch?v=NHV2hEkFSCg
- J.Q. Dickinson Salt-Works- Heritage Guide, accessed April 23, 2025, vimeo.com/109487574

Books

- "The Antebellum Kanawha Salt Business and Western Markets" by John Stealey
- "Virginia Slavery and King Salt in Booker T. Washington's Boyhood Home" by Larry Linwell Rowe
- "Through the Fading Darkness, A New American Novel" by Zac Northup with Nancy Bruns

Resources

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Above an ancient underground sea in West Virginia, a family reclaims their salty – and complicated – heritage – Roadtrippers, accessed April 16, 2025, roadtrippers.com/magazine/salt-works-west-virginia/

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