

Hopewell Furnace

National Park Service
U.S. Department of the Interior

Hopewell Furnace National Historic Site
PA



ESTABLISHMENT DAY

AUGUST 1, 2026

1 PM - 8 PM

featuring

IRON POUR

FIRST TIME IN 143 YEARS

The Main Attraction:

1 pm Charcoal Burn Starts

1 - 6 pm Hands on Activities

6 - 8 pm Iron Pour

And more! Join in on activities
commemorating 250 years of American
industry with various park partners.

EXPERIENCE YOUR AMERICA™

Celebrate Hopewell Furnace National Historic Site's 88th birthday and join us as we commemorate 250 years of American industry. We'll cap off the day with an iron pour, the first time iron will flow at Hopewell Furnace in 143 years!

- *Kick-off the day at 1:00 pm when the charcoal pile is lit to start our summer charcoal burn*
- *Discover industry and history beyond Hopewell Furnace from our park partners*
- *Learn the art of molding and make your own miniature stove plate*
- *Check out Blacksmithing demonstrations*
- *For an extra fee, create your own design in a scratch block mold and later see it poured with iron*
- *From 6:00 pm – 8:00 pm, we'll tap a non-historic furnace and pour iron!*

2026 Iron Pour Plans

Objectives

- Demonstrate how a primitive blast furnace operated.
- Cast actual iron products for future use in programs and for purchase
- Allow visitors the opportunity to create their own cast iron products through scratch block molds.
- Cast commemorative medallions that will be available for purchase after the event.

Overview

Various iron products will be produced during the event using bonded sand molds. The casting process will utilize a cupola furnace that continuously runs via coke (refined coal) and iron.

OPERATION

The cupola is a cylindrical furnace with a firebrick or a high alumina refractory lining the inside. Only used for cast iron, the cupola employs the use of Coke (fuel, refined coal) and air (a blower). This mixture will heat the furnace to around (2600° to 3000° Fahrenheit) melting the iron and burning off the coke simultaneously.

The furnace will be lit about three hours in advance of the first scheduled pour. The furnace will be regularly charged with measured quantities of coke and iron to provide the ingredients necessary to reach the necessary temperature for tapping. The furnace will be regularly tapped (roughly every 12 minutes) releasing roughly 100 pounds of iron to be poured into various molds. In-between taps, the furnace will continue to be charged with measured quantities of iron and coke.

Responsibilities

- **Charging** – the adding of measure amounts of iron and coke to the furnace (& some flux).
- **Tapping** – removing the Bott from the tap hole of the furnace using a metal spike and hammer.
 - *Bott* is a clay, sand, and saw dust plug.
- **Time Keeping** – keep track of time for each time the furnace is charged (coke/iron) and tapped.
- **Pouring Crew** – are the people that remove and pour a heat of iron from the furnace. Jobs include:
 - **Tapper and Botter** - opens and closes the cupola
 - **Skimmer** - keeps slag from entering the mold & helps spot the pouring of the mold
 - **Driver** - pours the iron from the ladle with help from the *Dead*
 - **Dead** - the other person on the ladle that supports the *Driver*.

Materials

- **Iron** – broken up from scrap metal to half dollar size pieces
- **Coke** – Refined form of coal (impurities removed)
- **Flux** – used to help remove impurities from the molten iron and increase the flow-ability of the metal.
- **Slag** – By-product or impurities that are lighter than iron and float to the top of melt. Remove via slag hole by **Skimmer**.

Tools

- **Ladle** – Like a crucible but is not placed in the furnace
 - Ladle warmer is used to keep it close to the proper temperature.
- **Bott** – is a clay, sand, and saw dust plug for the tap hole.
- **Skimmer** – pushes back the remaining slag in the ladle, so as not to enter the mold.
- **Tap Hammer** – a heavy hammer used with a spike to break and remove the Bott.

Safety

- **Jacket** – leather (welding) or foundry (silver), long sleeved.
- **Helmet** – one that completely covers your head, with a face shield (screen & plastic).
- **Leggings/Chaps** – used to cover your lower half or legs.
- **Spats** – covers your boots so iron won't have an easy path to your skin Shoes – all leather upper boot with a beefy sole; insulation is key.