

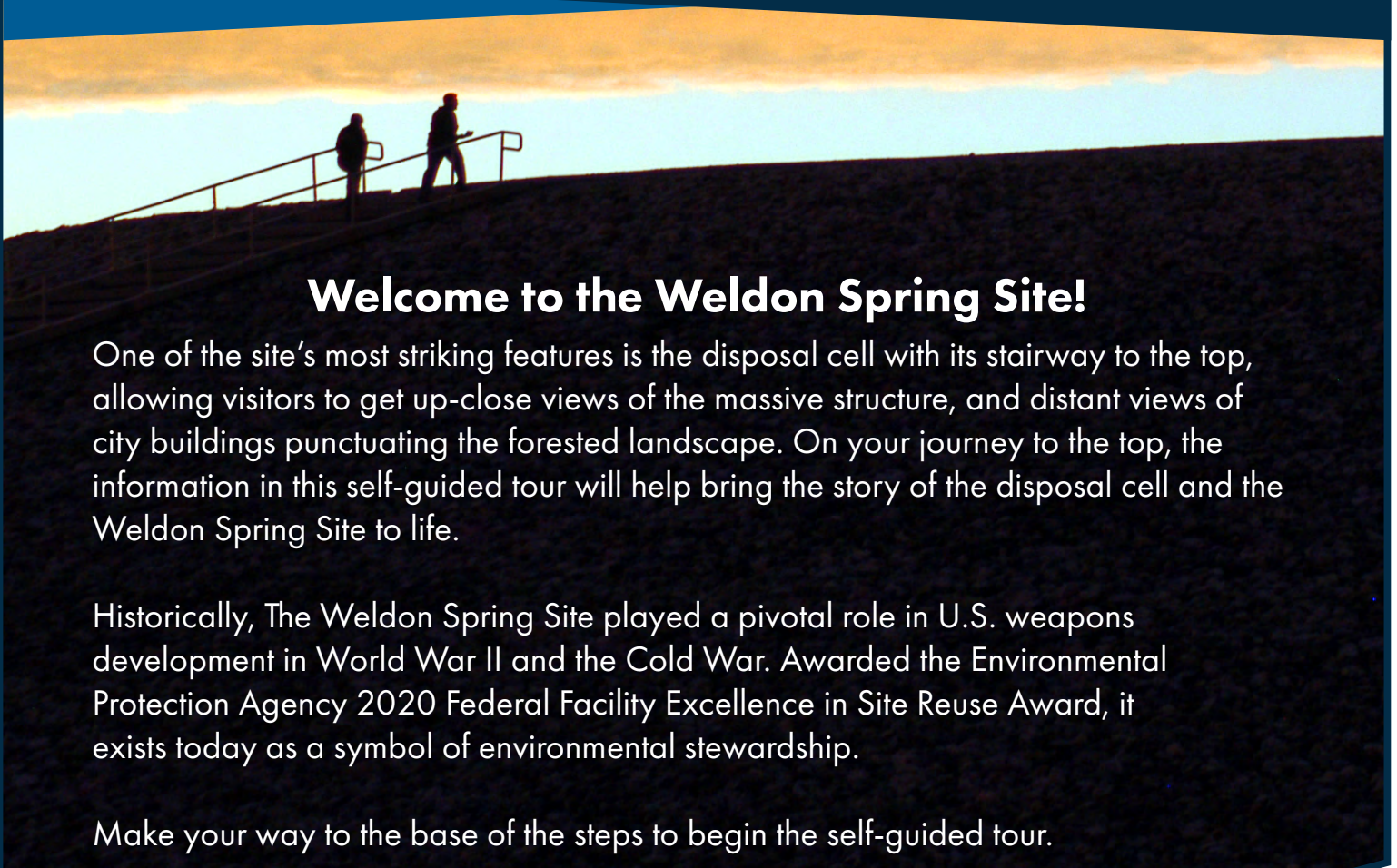


WELDON SPRING SITE  
A Legacy of Service

Weldon Spring Site  
**INTERPRETIVE CENTER**

# JOURNEY TO THE TOP

## Self-Guided Disposal Cell Tour



### Welcome to the Weldon Spring Site!

One of the site's most striking features is the disposal cell with its stairway to the top, allowing visitors to get up-close views of the massive structure, and distant views of city buildings punctuating the forested landscape. On your journey to the top, the information in this self-guided tour will help bring the story of the disposal cell and the Weldon Spring Site to life.

Historically, The Weldon Spring Site played a pivotal role in U.S. weapons development in World War II and the Cold War. Awarded the Environmental Protection Agency 2020 Federal Facility Excellence in Site Reuse Award, it exists today as a symbol of environmental stewardship.

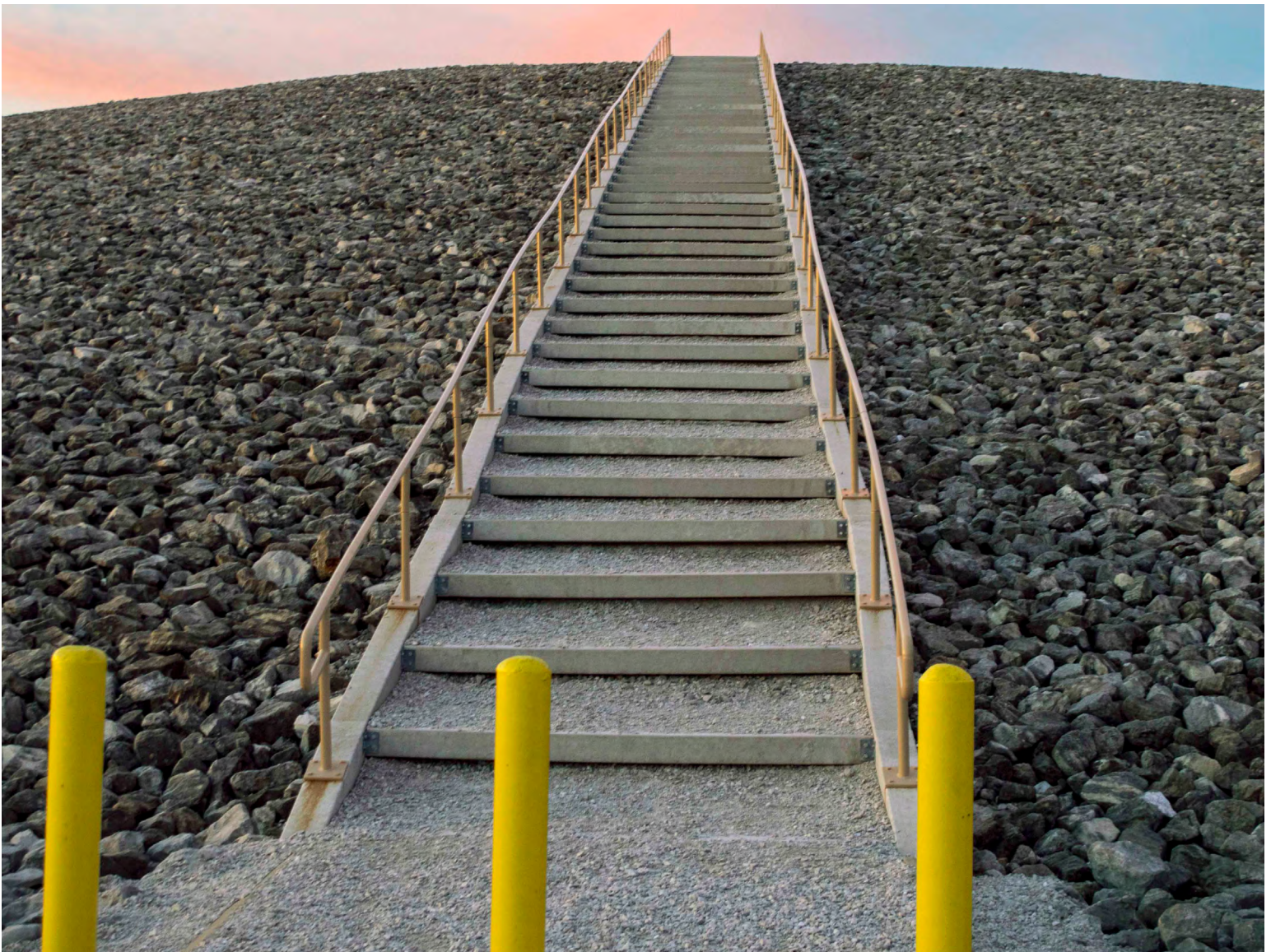
Make your way to the base of the steps to begin the self-guided tour.



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management





## **Your Journey Begins — Base of the Disposal Cell**

### **Stop 1**

The steps before you pave the way across limestone rip-rap and up the 75- foot ascent to the top of the disposal cell. Three feet below the rip-rap, additional layers of natural material and liners encase the dismantled remains of two factories that once operated here decades ago. How many stairs do you think there are? Take a guess and count them as you go.

During World War II the Weldon Spring Ordnance Works (1941-1945) produced 75 million pounds of TNT and DNT for national defense. Later, from 1957 to 1966, the Weldon Spring Site Feed Materials Plant refined uranium ore concentrates. This material was shipped to other facilities for eventual processing and inclusion in nuclear weapons or reactor fuel.



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## You're Halfway There — Top of the Stairs Stop 2

It can be quite a hike to the top of the 47 stairs, but the view is well worth it!

Notice the color of the limestone as the disposal cell begins to slope upward compared to its base. Engineers expertly designed the disposal cell using denser limestone at the base, which has a slightly darker color. Facing the interpretive center below, you'll see the Hamburg Trail spanning the property. Once a construction haul road used during the remediation, it now provides a hiking and biking path connecting to the Katy Trail and Busch Greenway.

A one-of-a-kind destination, the disposal cell is open to the public during daylight hours. Our interpretive staff provide public and school programs that can include a journey to the top. [Visit our website](#) to learn more about participating in our public or school programming.



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## **A One of a Kind View — Welcome to the Top!**

### **Stop 3**

Congratulations, you made it all the way to the top!

Forested land dominates the views to the north and south. Historically, these areas were part of the Weldon Spring Ordnance Works. Today, they are under the stewardship of the Missouri Department of Conservation and offer outdoor recreational opportunities such as hiking, biking, hunting, and fishing. The U.S Army Reserve Center can be spotted to the west, while Francis Howell High School lies to the east.

The Howell Prairie surrounds the 41-acre disposal cell and covers 150-acres of land. It includes approximately 90 different native plant species and is home to many pollinators and other wildlife. In the spring, watch for killdeer scurrying around the prairie edges. You'll recognize these unique ground-nesting birds by their black neck bands, long legs, and trill warning calls. The prairie pops with color in the summer months providing visitors with a magnificent display of golden, rose, and violet hues. In early fall you might catch a glimpse of monarchs as they migrate toward Mexico. Visitors in colder months might see a Northern harrier cruising over the prairie, or flocks of snow geese high in the sky.

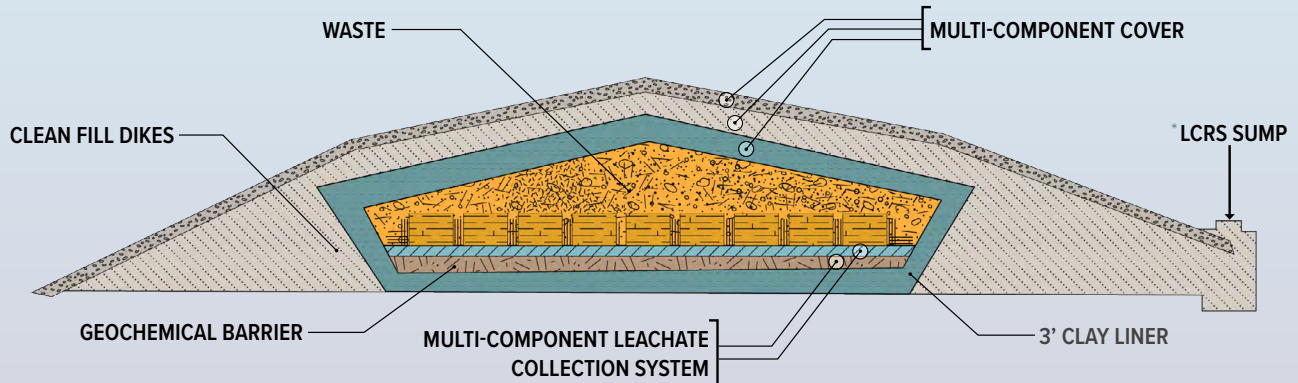
Can you find the structure that looks like a very round water tower? It can be spotted far past the interpretive center to the southeast. Have you guessed what it is yet? It's a National Weather Service Doppler radar!



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# DISPOSAL CELL

## CROSS SECTION



\* LEACHATE COLLECTION AND REMOVAL SYSTEM

## How was the Disposal Cell Constructed?

### Step 3 (continued)

Following general concern for the environment across the nation, the former uranium processing plant was added to the National Priorities List of polluted locations requiring a long-term clean-up response. Remediation of the site took place from 1986 to 2001. A massive undertaking, the disposal cell took four years to construct and contains the deconstructed buildings and wastes from the old plant and contaminated soils. The 1.48 million cubic yards of waste is surrounded by the many layers of the disposal cell. Together the layers form a barrier between the waste and surrounding environment. Individually, the layers perform different functions. For example, the outer limestone layer of rip-rap prevents erosion from plants and animals, while the clay layer minimizes radon emissions and prevents moisture from entering the disposal cell. Why do you think stone, pebbles, and clay were used to construct the cell instead of layers of man-made materials?

Hint: Imagine the erosion that occurs to concrete structures such as a road overpass after a harsh winter. Also, consider the environmental impacts of using natural versus synthetic materials in the disposal cell.

During construction, moisture accumulated within the disposal cell. The trapped moisture slowly drains (or leaches) down through the layers where it is captured and pumped into the building near the base of the disposal cell to the north. There, the moisture, called leachate, is collected, treated, and prepared for transfer to the Metropolitan St. Louis Sewer District.



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## Overlooking the Prairie — Heading Down the Stairs. Stop 4

Before walking down the steps, scan the prairie to the far right. Can you spot a set of five yellow poles? The center pole is a groundwater monitoring well and the four outer poles are cement bollards that protect the monitoring wells from accidental vehicle impact.

The former contaminant source areas were thoroughly remediated; however, remnant contamination remains in the bedrock. Most of the remaining contamination is in fractures in the bedrock about 50 to 75 feet below the ground surface.

The wells are part of the environmental monitoring program at the Weldon Spring Site. Staff routinely sample the well water to ensure the continued protection of human health and the environment.







## The Journey Continues — Visit the Native Plant Education Garden Stop 5

Before leaving, consider stopping by the Native Plant Education Garden, a favorite spot of monarch butterflies in the spring and fall. Why do you think the monarchs prefer this spot?

The new building near the entrance to the Weldon Spring Site is the new interpretive center and office complex. It is scheduled to open in 2021 and will feature a new exhibit gallery, classrooms, auditorium, and public meeting rooms. It will provide enhanced educational opportunities for the public and visiting school children, and serve as a gathering point for community groups.

Thank you for visiting the Weldon Spring Site today. Access our website at <https://go.usa.gov/xsZg4>.

Contact us at [WSInterpretiveCenter@lm.doe.gov](mailto:WSInterpretiveCenter@lm.doe.gov) or **636-300-2601**.



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