# Delaware Water Gap

National Recreation Area NJ, PA

## ALERTS IN EFFECT

PARK CLOSURES

### Main Street Walpack Bridge Closed Until Further Notice

Main Street in Walpack Center is closed at the Flatbrook Bridge due to structural damage to the bridge.

## Old Mine Road South Closed for Rehabilitation Project

Old Mine Road between Millbrook Village and Worthington State Forest is closed for a pavement rehabilitation project. No pedestrian, bicycle, or vehicle traffic is permitted in the closed area. Please see news releases for more information. More (https://www.nps.gov/dewa/learn/news/newsreleases.htm)

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/ Natural Features & Ecosystems (https://www.nps.gov/dewa/learn/nature/naturalfeaturesandecosystems.htm) / Wetlands Restoration

# Watergate Wetlands Restoration Project

Construction is underway for the Watergate Wetlands Restoration Project at Delaware Water Gap National Recreation Area. For the duration of construction, the area is closed to all visitors. The closed area is surrounded by orange fencing and includes the Watergate Recreation Site, Silvie Meadow, and 200 feet on either side of Van Campens Brook from the Susquehanna-Roseland Transmission Line right-of-way to Millbrook Village. The goal of this project is to restore wetlands that were historically present, and to restore the natural function of Van Campens Brook.



Aerial view of Watergate Recreation Site. Several ponds containing small islands are visible. A straight mowed right-of-way is near the recreation area. Roads and old roadbeds are also highlighted. *New Jersey State Imagery* (2015)



A summer day at Watergate Recreation Site before construction began. Visible above the tree tops is the Susquehanna-Roseland Transmission Line NPS Photo

## **History of Watergate**

When European settlers arrived in the Van Campens Brook Watershed in the early to mid- 1800s, they began manipulating the land to suit their needs including the installation of ditches and dikes to drain wetlands and create farmable land. They diverted Van Campens Brook to the side of the valley, and the new location of the stream was reinforced when the Columbia-Walpack Turnpike was built parallel to it. In the mid-1900s George Busch was the owner of the land now known as Watergate Recreation Site. He converted the area from farm land to vacation property. The farm fields were excavated to build several ponds surrounded by a large open lawn, and a series of small dams were built across Van Campens Brook.

These changes had many negative environmental effects, such as:

• Increasing the water temperature in Van Campens Brook to a range that is uninhabitable for our native aquatic animals;

- Creating conditions that harm native species but allow invasive species to flourish;
- Causing erosion during floods that reduces water quality in Van Campens Brook;
- Increasing the speed of Van Campens Brook during floods which damages infrastructure such as trails.



### (https://www.nps.gov/articles/invasive-rusty-

### crayfish.htm)

Rusty crayfish (Orconectes rusticus) is an invasive species that has been found in Van Campens Brook near the project site. This species thrives in warm waters, can outcompete our native crayfish species, and eats the eggs of native trout.

NPS Photo, James Smith and Chandra Wiley



Several picnic tables grouped under a single tall tree at Watergate Recreation Site. The picnic tables were moved by visitors in an effort to find shade. *NPS Photo* 

In the 1980s, the National Park Service capitalized on the pre-made ponds and expanded the site's amenities to include a picnic area and open water fishing opportunities. However, in recent years Watergate Recreation Site received low visitation for a variety of reasons, such as:

- There was very little shade in the picnic area;
- Geese flocked to the picnic area and became a nuisance to visitors and created an unsanitary environment;
- The shallow, warm ponds became a breeding ground for algae in the summer;
- The 200-foot-tall Susquehanna-Roseland Transmission Line impacted the scenic vista.

The construction of the nearby Susquehanna-Roseland Transmission Line in 2013-2014 impacted the environment at Delaware Water Gap National Recreation Area; to mitigate those effects Public Service Electric & Gas (PSE&G) and PPL Electric Utilities (PPL) have fully funded the Watergate Restoration Project.

# **Before & During Construction**

The Watergate Recreation Site has gone through many changes since construction began. On the following images, use the slider feature to compare the current landscape to what it looked like before construction started.



#### Left image

Before: View from the top of the staircase near the parking lot. A large, manmade pond is in the distance. Credit: NPS Photo

#### **Right image**

After: View from the top of the staircase. The pond has been removed and the area leveled. Topsoil was placed and native plant species were planted and have started to grow. Several tree stumps were repurposed into wildlife habitat structures.

Credit: NPS Photo/ A. Grismer





### Left image Before: A failing dam in Van Campens Brook. This dam diverted the stream towards the power lines. Credit: NPS Photo

## Right image After: Van Campens Brook after the concrete dam was removed and the

streambank restored to its natural state. Credit: NPS Photo/ A.Grismer





### Left image Before: One of the ponds at Watergate Recreation Site before construction began. Credit: NPS Photo

# Right image

After: The pond area after it has been dewatered, excavated to the appropriate grade, and planted with native vegetation. Credit: NPS Photo/ A. Grismer

# What Has Been Done

One of the first things that was completed on the project was the installation of orange fencing around the area. This fencing serves several functions:

- It clearly marks the work zone;
- It prevents animals from crossing under, over, or through it;
- It has a silt barrier at the bottom to contain soils within the project boundaries.



The orange critter fence seen above has black silt fencing on the lower portion to prevent soil from leaving the project area and is buried too deep for animals to dig under. The top portion of the fence folds back towards the outside of the project to prevent animals from crawling up and over. *NPS. Photo* 



A biological monitor holding a Painted Turtle (Chrysemys picta) that was found within the construction site. This turtle was then safely released to an area outside of the work zone. *NPS. Photo* 

After the fencing was installed, biological monitors conducted thorough pre-construction surveys to find, catch, and safely release any critters in the project area. They remained onsite full-time during construction in case any more animals were found. Archeological monitors were also onsite to identify and document any unanticipated culturally or historically significant artifacts that may have been uncovered during earth-moving activities.

The numerous ponds around Watergate have now been removed, as well as the grassy picnic area. This process involved salvaging fish and pumping the water from the ponds through a sediment-blocking filter and into Van Campens Brook. Once the ponds were drained, the dams could be removed, and the soils could be pushed around to an appropriate elevation and slope to support the groundwater-fed wetlands.



One of the ponds at Watergate Recreation Site that is in the process of being dewatered. The previous shoreline is exposed as the water recedes. *NPS Photo* 

Prior to any excavation, numerous trees were taken down in locations that will be returned to wetlands. Some of the trees that were cut down are being reused throughout the project area and along the stream to create habitat structures for small animals. The tree limbs and stumps were stacked and piled in a way to provide shelter, shade, and cover from predators. The tree roots that were placed along the stream also act as protection for the streambank to prevent erosion from future storms.



Wooden habitat structures scattered throughout an open and restored wetland. NPS Photo/ A. Grismer

## What is Left to Come



Van Campens Brook shortly after construction on the stream was completed. Erosion control matting is in place while native vegetation rehabilitates the area. NPS Photo/ A. Grismer

While the majority of work has been completed on site there are still a few remaining tasks that need to be finished before Watergate can open to the public.

This includes:

• Seeding and Planting- Native plants, which are currently being grown in a nursery, will be transplanted to the site in the fall. Native seeds will be dispersed throughout the project to encourage native plant growth. Much of the site was seeded and planted in the spring, but there are several areas that still need to be treated. A layer of hydromulch will be sprayed over the seeds to provide a good environment for germination and keep the soil in place.

• **Invasive Species Treatment**- Over the next several years, invasive species will be monitored and removed if found. This will give native plants an opportunity to become established.

Watergate Recreation Site remains closed to the public while construction is ongoing. In addition to environmental benefits, the restored site will provide improved quality of bird watching and cold-water angling. The site will be fully returned to its natural state and the project completed in late 2022.

To learn more about this project, visit the Park Planning Page (https://parkplanning.nps.gov/projectHome.cfm?projectID=62575) or call 570-426-2452.

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### CONTACT INFO

### Mailing Address:

Delaware Water Gap National Recreation Area P.O. Box 2 Bushkill, PA 18324

### Phone:

570 426-2452