

# Waterworks Conservation Area



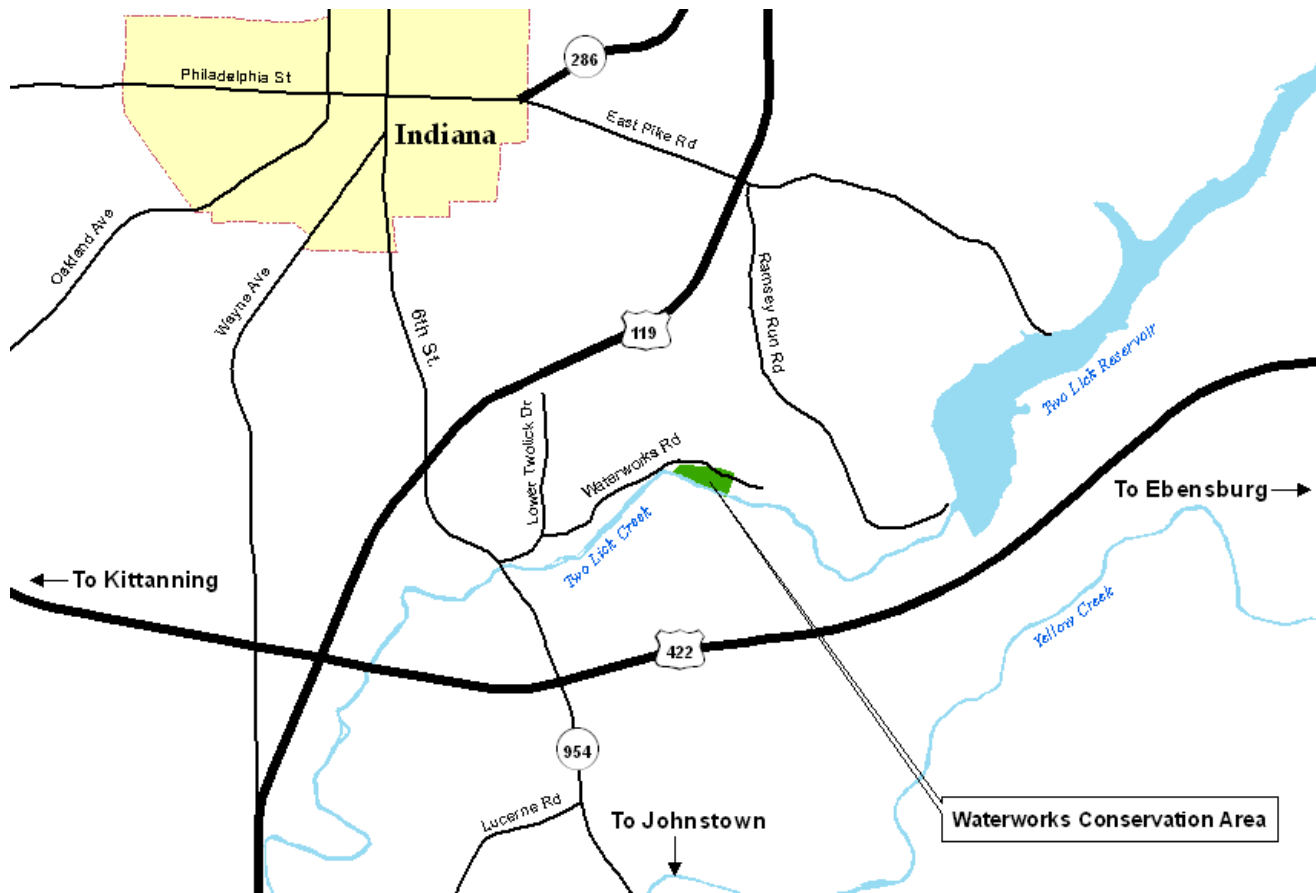
The Waterworks Conservation Area is a 10-acre site located next to Two Lick Creek, 3 miles south of Indiana, Pennsylvania. The site was donated to Indiana County by Consol Energy.

The site combines recreational opportunities with environmental restoration. This restoration includes an acid mine discharge (AMD) treatment system and an artificial wetland.

Planned recreational opportunities include a pavilion, trail circuit, fishing access and canoe/kayak launch.

Waterworks is located on a portion of the former Rochester & Pittsburgh Coal Company Lucerne 3A deep mine, which operated until the mid-1960's.

The Indiana County Conservation District and other partners are assisting in the development of the Waterworks Conservation Area.



**Two Lick Creek**

**For additional information contact:**

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## Acid Mine Discharge

Acid mine discharge (AMD) results from mining coal or mineral deposits. Water flowing from the mines is acidic, which means the pH is below 6. Acidic water is harmful to fish and other organisms that live in streams.

The water becomes acidic because of a chemical reaction with the mineral pyrite ( $\text{FeS}_2$ ). Pyrite contains iron and sulfur, which are released into water through the chemical reaction.

Acid mine discharges are treated with both active and passive treatment systems. These treatments result in cleaner and healthier streams. Fish and other organisms return to these clean waters.

The discharge at Waterworks has a flow rate of 100 gallons per minute and a pH of 2.7. To treat this, a 75-ton lime dosing silo has been installed over the mine discharge.



**Lime dosing silo at Waterworks**

Powered by water, premeasured amounts of hydrated lime are released into the stream, which will raise the pH of the water and help restore it to natural conditions.

## Mining History

In 1904, Lucerne mines opened in Indiana County. The three mines (#1, 2 & 3) were all in the Upper Freeport Seam. The mines were owned and operated by the Rochester & Pittsburgh Coal & Iron Company (R&P).

At one time, R&P was one of the largest producers of bituminous coal in the United States. In 1998, Consol Coal Group (Consol Energy) acquired R&P.

Waterworks is located at the Lucerne 3A mine. Lucerne 3A was in operation from around 1907-1967.

There were 1,069 employees at the Lucerne mines. The capacity of the mines was 6,000 tons/day, or the equivalent of 150 freight cars. 900,476 tons of coal were mined while the Lucerne mines were in operation.

While there is an acid mine discharge treatment facility at Waterworks, it is not the first. In 1967, R&P installed an acid neutralizer to treat water at the #3 mine. Here, limestone was added three times a day. Iron was also removed.



**Lucerne Mines**

## Park Information

### Planned features include:

- Pavilion with observation deck overlooking Two Lick Creek
- Canoe and kayak launch
- Fishing access to Two Lick Creek
- Trail circuit around wetlands with interpretive signage
- Path along Two Lick Creek
- Public restroom and parking area

### Directions:

From Indiana, head south on 6th St. (PA 954) for approximately 2 miles. Turn left onto Lower Twolick Dr. Follow this road for around 0.2 mile, and turn right onto Waterworks Rd. As you follow the road downhill, the entrance will be on your right.

### Hours:

Waterworks Conservation Area is open to the public from sunrise to sunset.

### Indiana County Parks & Trails:

Indiana County Parks & Trails is a natural resource-based park system located in southwest Pennsylvania. We operate 2,600 acres of parks, natural areas, historic sites and covered bridges, along with an extensive regional trail system.

Visit [www.indianacountyparks.org](http://www.indianacountyparks.org) for more information.