

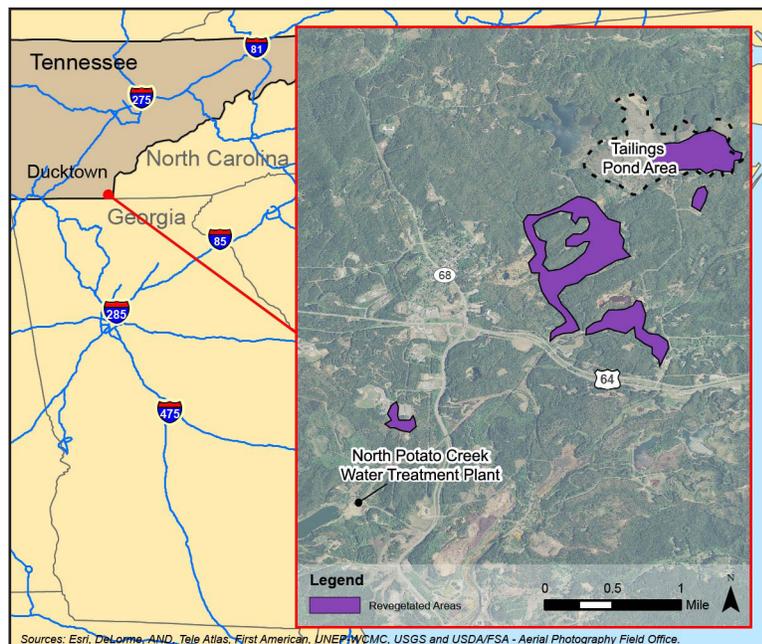


# Supporting the Health of Pollinators: *Ecological Restoration at the Copper Basin Mining District Site*

## Site Background and Cleanup

The Copper Basin Mining District site in southeast Tennessee and northern Georgia includes a 26-mile stretch of the Ocoee River and parts of the North Potato Creek and Davis Mill Creek watersheds. From the late 1800s to the 1980s, mining, processing, chemical manufacturing and waste disposal resulted in the erosion and transportation of soil and wastes from the watersheds into the Ocoee River. Historic mining and mineral processing operations on site left over 30 square miles of land barren of vegetation.

EPA is addressing the site through the Superfund Alternative Approach, which uses the same investigation and cleanup process and standards used for sites listed on EPA's National Priorities List. Cleanup activities include waste and structure removal, surface capping, stream and wildlife restoration, and water collection and treatment. Cleanup is ongoing.



## Reviving a Barren Landscape

Historic mining activities caused catastrophic degradation to the site and surrounding area. Efforts to restore the area's landscape began in the 1940s. Since 2002, 385 acres in the North Potato Creek watershed have been revegetated with native species and over 400,000 trees. Over 17 acres in the Davis Mill Creek watershed as well as several other areas were also revegetated. The native species provide a much-needed habitat for pollinators. Additional efforts to restore the site's ecological health include stream and wetlands construction.

## What Are Pollinators? Why Are They Important?

A pollinator is an insect or animal that moves pollen within or to another flower, fertilizing the plant. There are about 200,000 species of pollinators, including bees, butterflies, wasps, beetles, birds and bats. Many types of plants, including vegetable and fruit crops, require pollination to bear fruit. Recent declines in pollinator populations – and bees in particular – have raised concerns about the future of food supplies worldwide

## Restoring Native Plants, Wildflowers and Trees

The ecological restoration of over 400 acres on site involved revegetation with seed mixes that included over 20 varieties of native plants and wildflowers. Native grasses include annual rye, orchard, Indian, switch and weeping love grasses. Native flowers include sunflowers, goldenrod, and red, ladino and yellow sweet clover. Native trees and shrubs include river birch, silky dogwood and tulip poplar.

Restoring the site with native plants, wildflowers and trees also serves to enhance the remedy. Severe erosion and sediment deposits in streams made stream cleanup difficult. Restoring and revegetating the area helped provide erosion control. This also improves water quality, further enhancing the health of area ecosystems.



*Barren landscape and erosion on site prior to restoration efforts (1912).*



*A honeybee pollinates a yellow tickseed sunflower growing in the North Potato Creek watershed on site.*

## Providing Pollinator Habitat

Ecological restoration reestablishes habitat for pollinators. In addition to pollen and nectar, the habitat provides pollinators with the space they need to thrive. The diversity of native plants, wildflowers and trees used on site can also attract multiple species of pollinators. For instance, goldenrod's bright flowers are attractive to beetles, honeybees, butterflies and hummingbirds. Red clover and sunflowers attract honeybees and bumblebees.

The use of native plants, wildflowers and trees as part of ecological restoration during cleanup results in vibrant, healthy ecosystems, providing a haven for pollinators that supports their long-term health. As the Copper Basin Mining District site illustrates, many federal cleanup sites are well suited to support a range of ecological reuses, including pollinator habitat.

## Supporting Pollinator Health

EPA supports the health of pollinators in many ways. Efforts include:

- Co-chairing the Pollinator Health Task Force and development of a Strategy to Promote the Health of Honey Bees and Other Pollinators (<https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator%20Health%20Strategy%202015.pdf>).
- Issuing guidance on how to minimize risks to pollinator health from pesticides and other chemicals.
- Convening summits and conferences to discuss pollinator health.
- Partnering with pollinator-focused groups such as the Wildlife Habitat Council, the Pollinator Partnership and the Monarch Joint Venture. For more information on EPA's Pollinator Partnership, visit: <http://www2.epa.gov/pollinator-protection/partners-pollinator-protection>
- Promoting the ecological reuse of Superfund sites and other areas, with technical assistance and incentives for pollinator-friendly reuses.
- Recognizing the efforts of responsible parties and other stakeholders for supporting pollinator health.

For more information on EPA's support of pollinator protection and health, visit: <http://www2.epa.gov/pollinator-protection>

### POINT OF CONTACT:

Loften Carr  
Remedial Project Manager, EPA Region 4  
(404) 562-8804 | [carr.loften@epa.gov](mailto:carr.loften@epa.gov)