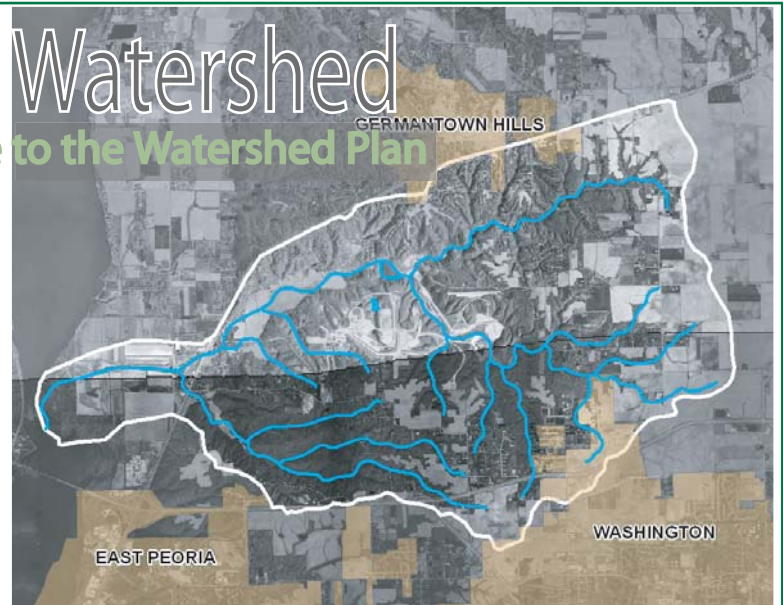


# Tenmile Creek Watershed

## Landowners along steep slopes: Guide to the Watershed Plan

Citizens of the Tenmile Creek Watershed face extensive challenges with erosion and water quality. Soil eroding from forested bluffs, construction sites, agriculture fields, and stream channels fill isolated lakes and contribute an estimated 23,500 tons of sediment to Peoria Lakes each year. This document summarizes the Tenmile Creek Watershed Restoration Plan and outlines specific practices that landowners along the bluffs can implement to reduce the risk of soil erosion on their property and protect the forests and local streams.



## About Tenmile Creek



Tenmile Creek Watershed is rural in nature but is urbanizing as a bedroom community with single family homes dominating new development. Many homes in this 11,027 acre drainage area are built near highly erodible, steep slopes in forested areas. Watershed management can mitigate the impacts of rapidly eroding ravines in these areas.

Watershed Statistics:

- Tenmile Creek is, in fact, ten miles long.
- Including tributaries, the watershed contains 44 miles of streams.

- 43% of the watershed is forest, 24% agricultural fields, and 21% grassland.
- Tenmile Creek drops a total of 370 feet in ten miles.
- The watershed contains 30 lakes and ponds.



Steep ravines form with concentrated runoff and a lack of appropriate vegetation to hold soil in place.

## The Mission of the Watershed Plan

The mission of the Tenmile Creek Watershed Planning Committee [composed of landowners, local government staff, engineers, and natural resource professionals] is to develop and promote, through education, the implementation of a [watershed plan]. We seek to reduce erosion and sediment load to the Illinois River, protect natural resources in the watershed and identify funding sources for implementation.

## Watershed Challenges

- Soils on steep slopes are highly erodible and many **houses built adjacent to steep slopes** are threatened by eroding ravines.
- Today's **thick canopy, dark forests** are a degraded version of the open canopy woodlands and savannas that once existed. This change in the forest has accelerated ravine erosion.
- **Development on the bluffs** increases stormwater flows that causes gully and ravine erosion. Soil lost in the bluffs is deposited in Tenmile Creek and the Illinois River at Peoria Lakes.



Gullies formed by storm drainage in nearby Ackerman Creek (pipes were probably added to control erosion, but will not solve the problem).

# Forest and Steep Slope Management

## For Landowners along the IL River Bluffs

Below is a summary of action items recommended in the *Tenmile Creek Watershed Restoration Plan*. More information is available on this subject at Tri-County Regional Planning Commission's website. Please visit [www.tricountyrpc.org](http://www.tricountyrpc.org)

### Allow sunlight to reach forest floors

According to vegetation studies conducted in the year 1820, the Illinois River Bluffs once consisted of open woodland/savanna habitat with an average tree density of **32 trees/ha**. Dominant trees were oak and hickory species. Early European observers experienced the River Bluffs as a rich tapestry of native grasses, wildflowers, sedges and other plants. Today tree densities can range from **280 – 470 trees/ha**, with little to no grasses or wildflowers. Unfortunately, these trees do not hold the soil in place like the blanket of vegetation that once existed. As a result erodible, bare, steep slopes are being washed into Tenmile Creek and the Peoria Lakes.

Why this dramatic change in the last 200 years? A necessary disturbance for the persistence and continual rejuvenation of the open woodland and savanna along the bluffs has been all but eradicated upon European settlement. Fire once played an integral role in maintaining the vegetation on the bluffs. Wildfires cleared the landscape in drought conditions and Native Americans burned the forest to maintain a vital food crop and open the lands for hunting. The bluffs responded to a discontinuation of fire with an explosion in tree and shrub populations.

- Manage forested areas to open the canopy and allow the growth of ground cover necessary for slope stability. Cut or girdle 80% of undesired tree species (i.e. sugar maples) that are under 8 inches diameter at breast height. Completely remove all non-native invasive plant species such as autumn olive, honey suckle, multiflora rose, and garlic mustard.
- Maintain open forests by removing undesirable saplings by pulling or conducting professional prescription burns about every three years. Areas that are not maintained generally return to "pre-management" conditions by year five.
- Case studies in Peoria Park District bluffs have indicated that no seeding is necessary to grow grasses and flowering plants on virgin soils. Even after 80 years seeds and root systems are still viable and ready to grow! Fill material will need seeding.
- DO NOT DUMP YARD WASTE IN FORESTED AREAS. Yard waste prevents the growth of deep rooted vegetation that anchors your soils. Contrary to popular belief, dumping yard waste in ravines does not slow erosion, but only hides the problem from site.

### Stewardship from your residence

Concentrated stormwater runoff from developed areas can cause substantial damage to ravines if the site is not properly engineered. Reduce your stormwater runoff by using rain barrels, planting rain gardens and native vegetation along slopes, and implementing other best management practices. See the "Central Illinois Homeowner's Guide to Stormwater Best Management Practices" from the TCRCPC website for more information.



*The photo above depicts an area without forest management. Invasive species have taken over, creating a dark, closed canopy that cannot support underlying vegetation.*



*Forest management, as depicted in the photo above, opens up the canopy and allows for the growth of groundcover that is necessary for slope stability.*