



Storm water runoff is a drain on Cleveland Metroparks as they battle erosion

By James Ewinger

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A pedestrian walks the all-purpose trail in the Cleveland Metroparks' Euclid Creek Reservation, above a retaining wall that has been damaged by the creek.

CLEVELAND, Ohio -- Developed land outside the Cleveland Metroparks has turned the 22,000-acre Emerald Necklace into the region's catch-basin for storm water runoff, damaging park property and costing taxpayers millions of dollars each year.

The runoff also is accelerating the erosion of hundreds of miles of waterways within the parks system, flushing as much as 45,000 tons of silt out into Lake Erie each year.

The **North Chagrin Reservation** has lost nearly a mile of parkway over the years, where \$1.5 million in grant money was spent to rehabilitate a stream. In other parts of the parks, trails and roads are threatened and retaining walls are collapsing. In its course through the Metroparks, **Euclid Creek** has sheared off concrete pylons two feet in diameter, toppled trees and defeated walls meant to blunt erosion.

Erosion-control problems can be found in at least 13 of the 17 reservations that make up the park system; repairing a single site can cost up to \$500,000.



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Richard Kerber, the Metroparks' director of planning, design and natural resources, said if the runoff problems aren't controlled, damage to stream beds and banks will be even greater and happen at increasingly faster rates.

Retaining walls have fallen prey to the rushing, storm-swollen stream in the Euclid Creek Reservation.

The park system, formed 93 years ago as a means of protecting undeveloped land in Greater Cleveland, was created before a growing population and booming industries could inhabit it. Since then, park managers have continued the practice of protecting the land, while acquiring parcels with the patience of stamp collectors.

But once pristine land and waterways join the park system, they remain vulnerable to storm water runoff from developed land outside the parks.

Much of the Metroparks holdings overlap with the **Northeast Ohio Regional Sewer District**, which has an inventory of \$228 million in existing storm water runoff projects across the region, encompassing all of Cuyahoga County and parts of Lorain, Summit and Lake counties.

Kyle Dreyfuss-Wells, manager of watershed programs for the sewer district, said that when flooding and erosion occur on the private land, "that manifests in the Metroparks."

Losing ground

The Cleveland Metroparks are at the receiving end of storm water runoff from surrounding communities, damaging park property and hastening the erosion of hundreds of miles of streams, creeks and rivers within the parks system.

Starting in July, landowners across the district **will be billed** based on the amount of runoff each parcel causes, Dreyfuss-Wells said. Some of the money from the fees will be used for runoff abatement projects, and some will go toward fixing damage caused by the storm water.

1. Huntington Reservation

Stone bank retention wall damaged along Porter Creek; repairs

"We have to take a regional approach. We cannot rely on the Metroparks to be the storm water retention system of the region," Dreyfuss-Wells said.

Vern Hartenburg, the Metroparks' recently retired executive director, told the sewer district in January that new regulations help, but most of Cuyahoga County was built up before the storm water reforms went into effect.

Mayfield Mayor **Bruce Rinker**, who serves on the Metroparks board of commissioners, said, "In the law, everyone shares responsibility for storm water runoff. Starting a good 15 or 20 years ago, you started to see local ordinances requiring developers to provide for retention and detention of storm water."

Moreland Hills Mayor Susan Renda said the Metroparks' South Chagrin Reservation and her village "share space across Chagrin River Road, where they have a wetland area, and we have erosion issues.

"It really affects their wetlands," Renda said. "We try to be sensitive and do ditching to keep our mud out of their wetland."

One change is that developers are now required to build **swales** to help with the runoff.

Kerber said the Metroparks perform a lot of their own erosion repairs using park employees, who often have to address the same problem repeatedly. He said that sometimes park engineers just let nature have its way.

Infrastructure repairs include relocating paved trails, replacing roadway and fixing bridges and other structures. Streams and rivers also can be fixed by using natural materials such as tree trunks to help redirect flowing water.



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Storm water runoff in the Metroparks' Rocky River Reservation has chewed off a 20-foot chunk of earth on the river bank near the Puritas Road bridge.

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