

GILLS CREEK RESERVE





**GILLS CREEK WATERSHED
ASSOCIATION**

Working to Restore, Educate, and Advocate for Gills Creek Watershed
www.gillscreekwatershed.org



CENTRAL CAROLINA
Community
Foundation

Funded in part by Central Carolina Community Foundation's Connected Communities grant
www.yourfoundation.org/

MKSK

We build on local strengths to create stronger communities and healthier environments
www.mkskstudios.com

July 2022

MAKING THE NEIGHBORHOOD GREENER

Creating the Gills Creek Reserve

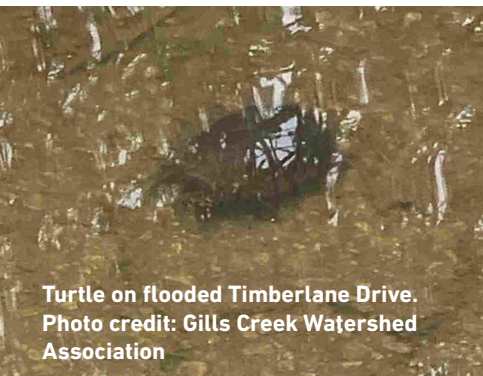
Richland County consulted with MKSK to transform the flood-prone properties on the Gills Creek Watershed into a passive park that the Rosewood District and nearby neighborhoods can enjoy. During the design process, the community created **a vision for a design that preserves the existing natural character of the watershed that is treasured by many.**



Flooding on Glenhaven Drive in 2015



Timberlane Drive flooding from a storm in 2021



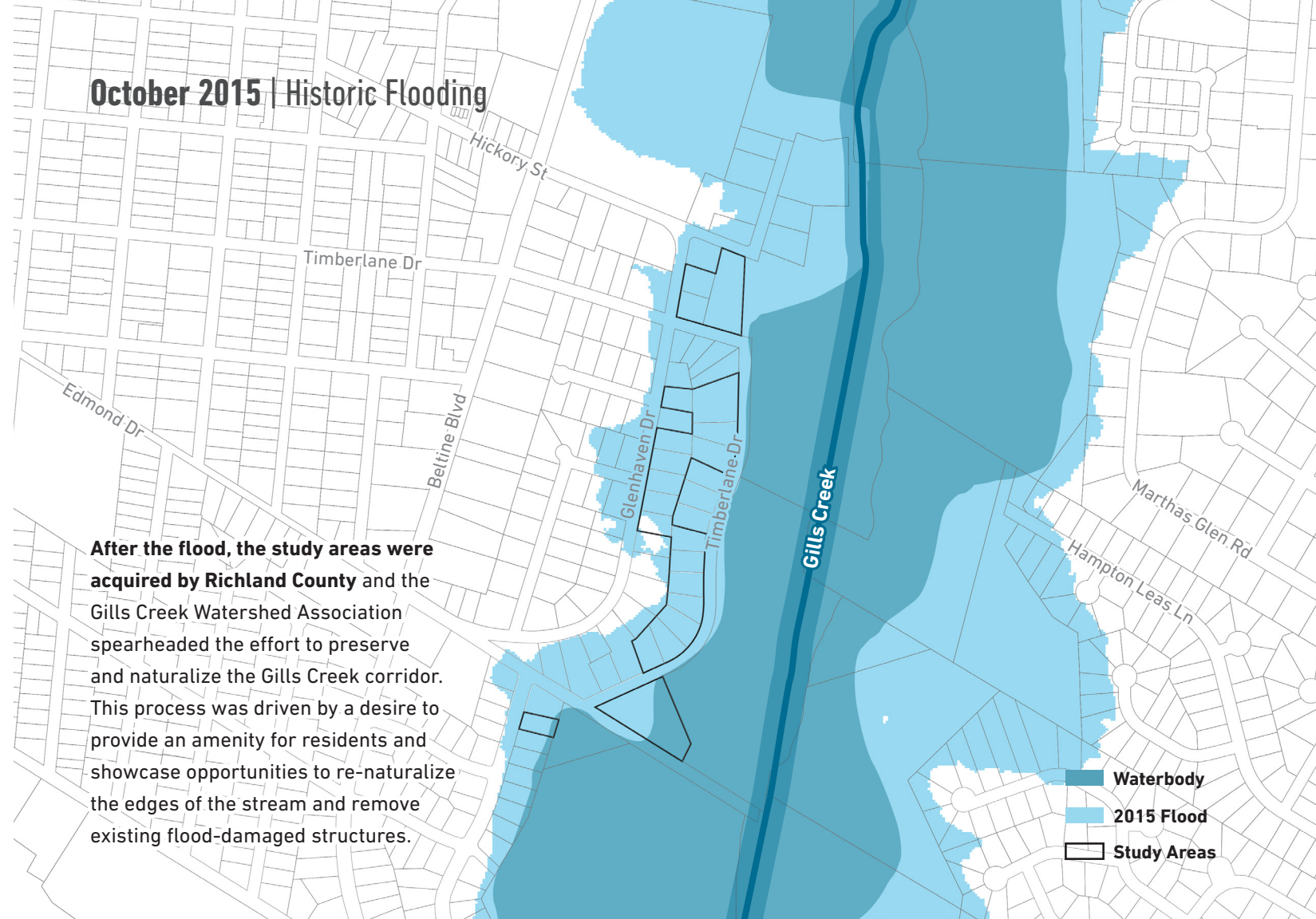
Turtle on flooded Timberlane Drive. Photo credit: Gills Creek Watershed Association

History | A Dynamic Stream and Watershed

The Gills Creek Watershed flows into the Congaree River through multiple jurisdictions, including the City of Columbia in Richland County. The watershed has over 115 miles of streams from all over the Columbia region, comprising a watershed that covers more than 47,000 acres of land. Within those acres, most of the land is developed with 51% of it being urban, 13.4% agricultural, and only 35.6% being a mix of forested, swamp, water, and marsh. The impacts of urbanization and development have caused negative effects on water quality including excessive stormwater runoff and sedimentation, obstructing access to the stream itself. With growing pressures to develop near Gills Creek, it becomes increasingly more important to preserve its natural beauty and enhance access to the stream.

The Flood
On October 4, 2015, a large storm caused heavy rain that set a record for the greatest rainfall in the history of Columbia; in the Gills Creek area a total of 21.49 inches of rain was recorded. This unprecedented amount of rainfall caused major flooding in surrounding areas of the creek, like Timberlane and Glenhaven Drive, causing damage to existing homes and more stream bank erosion and sediment build-up. In response to the historic flooding, the Gills Creek Watershed Association has helped to increase awareness and educate residents about improving the resilience of the creek system and reducing development pressure in the watershed. The 2015 flood created an urgency for the City of Columbia and Richland County to acquire properties through the FEMA Hazard Mitigation Grant Program to decrease development in the floodplain.

Sources: <https://www.weather.gov/cae/HistoricFloodingOct2015.html>
www.gillscreekwatershed.org



October 2015 | Historic Flooding

After the flood, the study areas were acquired by Richland County and the Gills Creek Watershed Association spearheaded the effort to preserve and naturalize the Gills Creek corridor. This process was driven by a desire to provide an amenity for residents and showcase opportunities to re-naturalize the edges of the stream and remove existing flood-damaged structures.

- Waterbody
- 2015 Flood
- Study Areas

Process | Partnering with the Local Community

To achieve these goals the Gills Creek Watershed Association and the City of Columbia and Richland County are educating the community about the implications of development and urbanization in the watershed on the water quality and overall health of

the ecosystem of Gills Creek. These efforts were reinforced by Richland County's recent amendments to the Land Development Code that updated the zoning on the properties from Residential-Medium Density to Open Space to support the planned

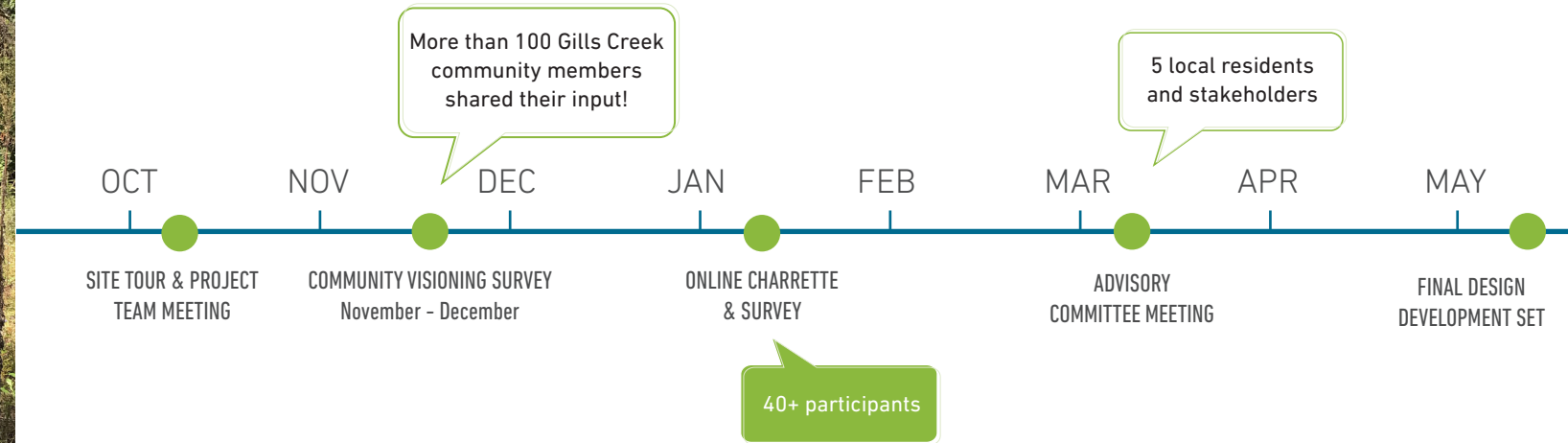
natural restoration of the site. Gills Creek Watershed Association also partnered with MKSK to refine the vision for a naturalized stream corridor and community amenity. To experience the beauty of the site, MKSK was led by the project team



through a tour of the study areas. The tour was an opportunity to meet with stakeholders and understand the challenges and opportunities to renaturalize and design these sites. One such opportunity for future trail

connectivity and improved pedestrian safety would be to close Timberlane Drive. The street is currently used by local residents for strolling and nature viewing, and with minimal vehicular traffic, the County and City are exploring a permanent street closure.

After the site tour in October, the design process included two community engagement sessions and an Advisory Committee meeting that informed the final design development set.



What We Heard | Online Survey & Charrette

"Maybe some kind of boardwalk that goes over Gills Creek swamp areas to have an up close look at the ecosystem and wildlife."

"I would love for the area to feature native plants and be a good place for birds and pollinators. Nature viewing and flood control."

"I would use it as a green space and park with my children. We would like to walk and ride bikes there."

"Peaceful place to enjoy the natural creek and mature trees, walking or picnicking"

"We need more spaces for children to experience nature within city limits"

"Walking for exercise and wildlife photography"

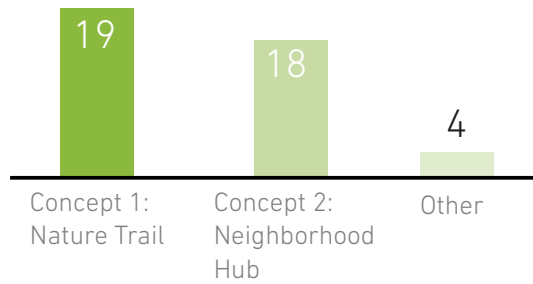
"I would bicycle to it from the Rosewood neighborhood. Also, I would possibly move to Rosewood to be near the park."

"For exercise. To enjoy nature. To walk my dog."



"The nature viewing platform and the community area. Also more trail length."

Preferred Concept



"Keep the vegetation that is currently there as much and possible and if planting is needed keep it as true to the neighborhood as possible."

"Signage to include a brief history of the area including the flood."



GILLS CREEK RESERVE

Neighborhood Hub & Nature Trail

1,951 feet of multi-use trail

13 new parking spaces

5.9 acres of restored green space

2,156 neighbors within a 15 min walk

22,148 square feet of native grasses

LEGEND:

A 8' Trail - Mulch

B Wood Boardwalk/Overlook

C Natural Play Area

D Aggregate Parking

E Trash Receptacle

F Environmental Signage

G Wood Bench

H Community Art Crosswalk

Study Area

Naturalized Landscape

Lawn

Native Seed Mix Area



Vision | Experiencing the Reserve



The boardwalk and overlook on Gills Creek is designed to have access to the stream from Timberlane Drive while providing a much needed amenity for nature viewing. Signage will educate users with a brief history and facts about the Gills Creek wildlife and 2015 flood.

The mowed area along Glenhaven provides significant opportunities for an amenity space for recreation like a nature play area. The nature play area can create a safe space for children to play with natural equipment that enhances the character of the park.



Implementation | Phasing & Cost

PHASE 1

- Removal of Invasive Species - \$85,800
- Trail Alignment / Installation - \$78,040

Cost: \$172,032*

PHASE 2

- Parking - 13 spaces - \$49,800
- Community Art Crosswalk (1) - \$100
- Native Seed Mix - \$5,537

Cost: \$58,209*

PHASE 3

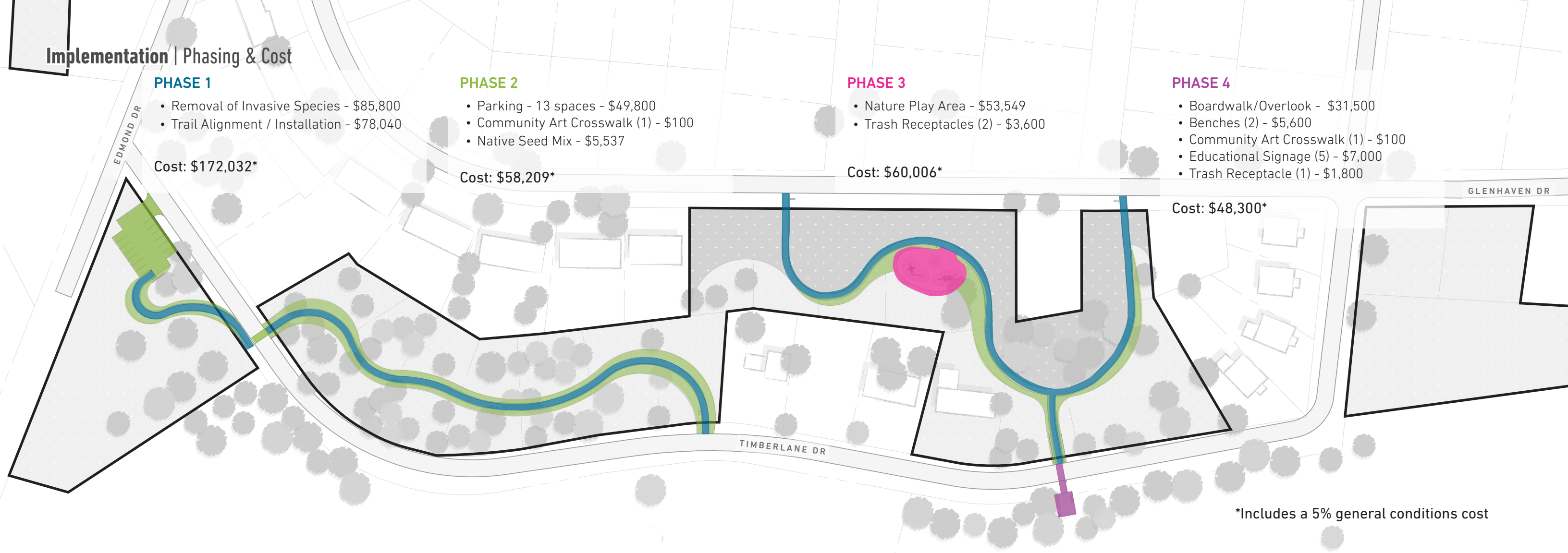
- Nature Play Area - \$53,549
- Trash Receptacles (2) - \$3,600

Cost: \$60,006*

PHASE 4

- Boardwalk/Overlook - \$31,500
- Benches (2) - \$5,600
- Community Art Crosswalk (1) - \$100
- Educational Signage (5) - \$7,000
- Trash Receptacle (1) - \$1,800

Cost: \$48,300*



*Includes a 5% general conditions cost



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