(RE) CREATE THE FLOW:

GREEN INFRASTRUCTURE IMPROVEMENTS FOR THE OUTDOOR ACTIVITY CENTER

PROJECT NARRATIVE: The Outdoor Activity Center (OAC) is located within a 26-acre urban nature preserve in southwest Atlanta. While the property is owned by the City of Atlanta, the preserve and associated environmental education programs are managed by the West Atlanta Watershed Alliance (WAWA), a local 501c(3) non-profit organization. The OAC is located within the historic Oakland City Neighborhood.

The OAC and surrounding neighborhoods hold critical importance to the collective ecological and cultural heritage of Atlanta. Land surrounding Oakland City was acquired from the Creek Indians in 1821. Oakland City was established in 1890 and officially incorporated in 1894. In 2003, the Oakland City Historic District was designated on the National Register of Historic Places in order to preserve the historic collection of early-mid 20th Century residential and community landmark structures.

Currently, the property is accessed by a network of trails that connect to Montreat Street on the east side of the property; Gaston Street on the west; and to the nature center property on the north side. On the south side of the OAC, the trails system connects to a public property which was a former practice lot for the Negro League baseball team, the Atlanta Black Crackers, during the 1920's and 1930's. Other surrounding amenities include the Oakland City Community Garden and other public land on Bridges Avenue. When not open to the public, the property is locked. No wayfinding or informational signage currently exists to make OAC visitors aware of these connected community amenities.

The OAC includes an urban forest with approximately 2 miles of walking trails. Maintenance of the trail system is currently unsustainable in spite of the many volunteer hours spent on its upkeep. The trails are in poor condition with few markings. Trails are eroding in some steep areas, soggy in lower parts, and contain tripping hazards in some areas where remnant steel rebar was once used to anchor trail borders and steps.

The OAC canopy includes a rich diversity of mature and old-growth trees, including the over 150-year old "Grandfather Beech." The understory on the property is a mix of native and non-native vegetation that covers hilly terrain. The property is bisected by a valley that runs from the northeast corner to the southwest corner.

A 1927 USGS quad map shows a segment of North Utoy Creek flowing through the valley of the OAC property. Two intermittent streams bring surface water to this segment of the North Utoy in the old topo map. One of these former intermittent streams now flows in a closed storm sewer pipe that drains a portion of Richland Road under the OAC nature center lot. The other stream currently flows in a severely eroded and actively eroding gully on the southeast corner of the OAC property.

Approximately 1.25 square miles of watershed area drains to and through the OAC property. The USGS StreamStats application describes 96.8% of the current watershed as urban development with over 36% of its area being impervious. The average annual precipitation for the area is 52.1 inches. The 2-year, 24-hour storm depth is approximately 3.7 inches. The one-year, 24 hours storm is approximately 3.3 inches.

A stated goal of this project is to capture 100 percent of the one-inch rain event. This approximately represents a 30-minute event that has a 100 percent chance of occurring in any given year.

Neighborhood runoff and streamflow from the watershed draining to OAC from the east is routed into a large, former combined sewer pipe that was disconnected from the sanitary sewer system in the recent past. Remnants of a previous stream bed are visible above ground and carry runoff and flows from seeps that are not captured by the buried pipe.

The majority of the baseflows that enter the property come from the northeast and the southeast of the property. Flows from the northeast are almost immediately captured by the buried pipe. Those from the southeast are conveyed through an actively eroding gully system and stagnant wet area before making their way into the pipe. The terrain and natural drainage patterns within the site have been altered and interrupted by previous sewer construction activities and sediment depositions from onsite gully erosion. These impacts, along with a significant amount of litter transported to the site by stormwater contribute to an unnatural appearance and reduction in the potential for fully developed ecosystem services (the many and varied benefits that humans freely gain from the natural environment and from properly-functioning ecosystems).

Stormwater runoff from the west boundary of the property also enters the old combined sewer pipe. This second inlet to the old sewer pipe is on the western end of the property. The conveyance upgradient of the inlet contains minor erosion that will be further evaluated during project design. Both the northeast and this western entrance to the old sewer pipe are easily accessible and present potential health and safety concerns for those visiting the OAC.

GREEN INFRASTRUCTURE IMPROVEMENTS

The defining feature of the Volkert Green Infrastructure Team plan for the OAC forest is the restoration of North Utoy Creek within the OAC property. Through urban stream design techniques, all perennial flows entering the property will be brought back above ground into an established stream bed with characteristics that mimic the original stream alignment. In some areas, particularly further downstream within the property, flows will be returned to the existing streambed. In the area where the stream enters the property, a new channel will be constructed to accommodate the existing storm and sanitary sewer infrastructure and overcome terrain altered by past utility construction and sediment deposition.

The North Utoy Creek Restoration will incorporate a constructed wetland floodplain, dry swales, and stepped Regenerative Stormwater Conveyance. Care will be taken to maintain and enhance the existing forest while supporting the reestablishment and reconnection of historic water flow.

DESIGN OPPORTUNITIES

RESTORE NORTH UTOY CREEK

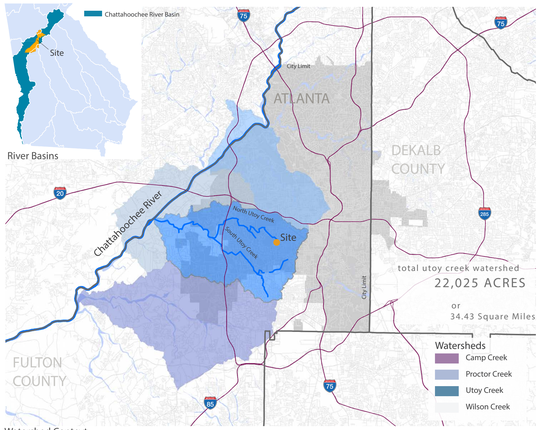
Filter stormwater • Reduce downstream flooding • Recharge groundwater
Reconnect Chattahoochee headwaters • Restore natural systems
Support critical native habitat • Enhance connections to Atlanta's ecology

CONNECT COMMUNITY

Repair walking paths • Facilitate outdoor exploration • Expand connectivity
• Incorporate signage • Address accessibility needs • Encourage interaction

CELEBRATE HISTORY AND HERITAGE

Share stories • Highlight cultural, ecological, and social heritage
Create places to reflect and to learn • Safeguard for future generations



Watershed Context

Site Context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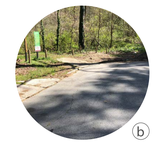
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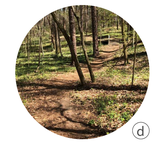
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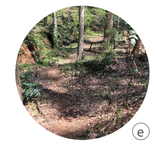
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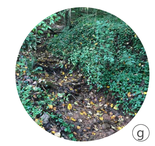
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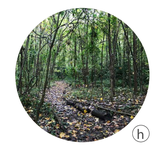
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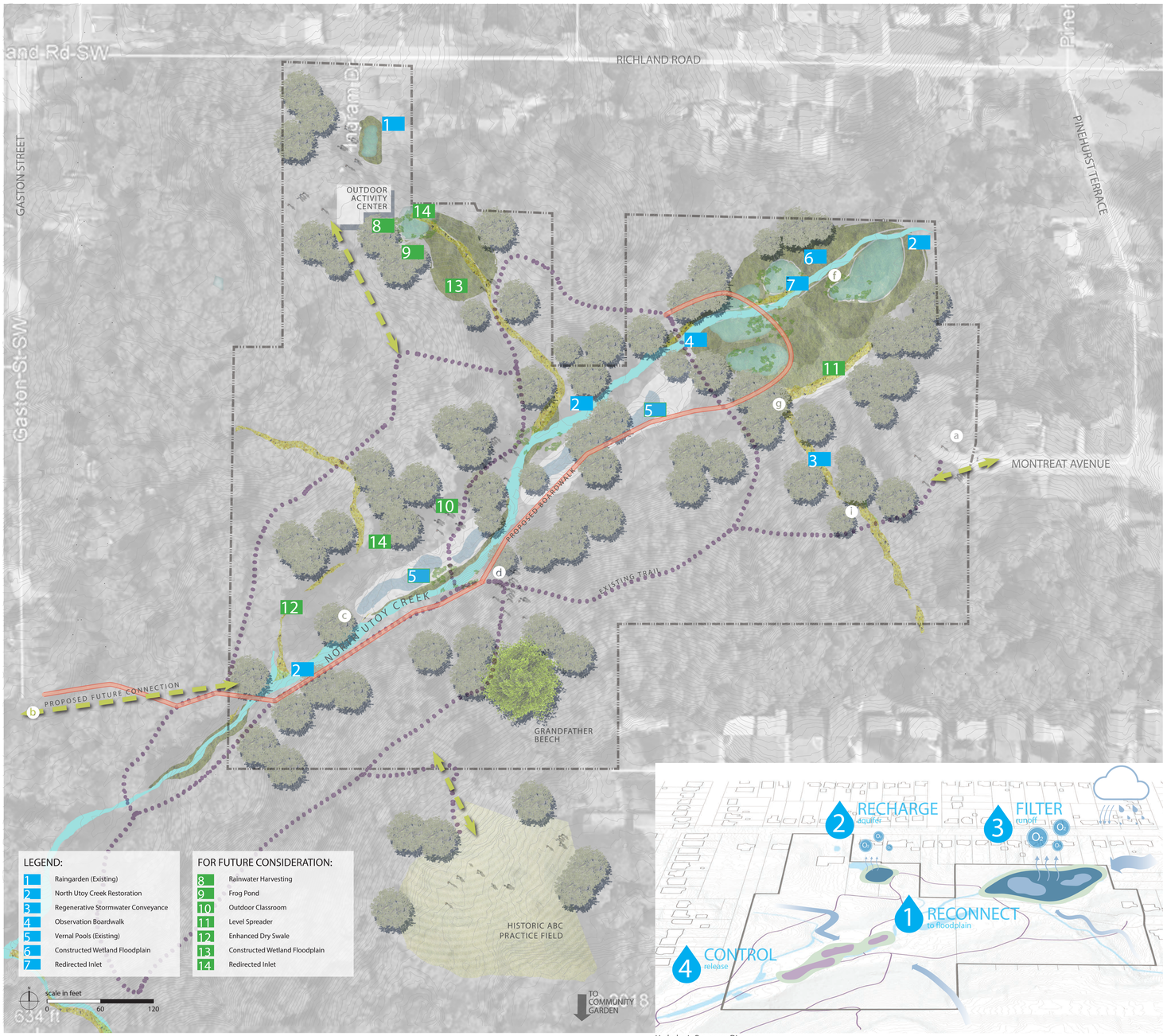
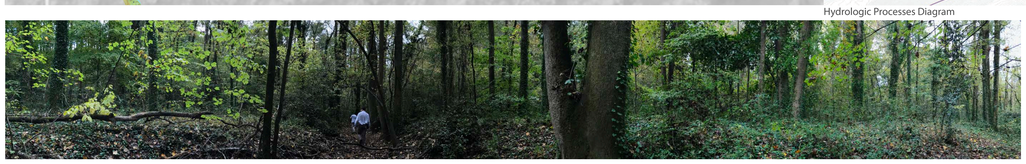
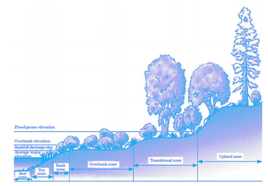


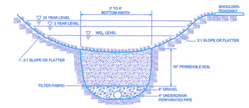
Hydrologic Processes Diagram



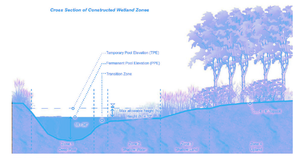
WATER CAPTURE AND TREATMENT



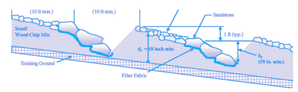
RECONNECT
flow



RECHARGE
aquifer



FILTER
runoff



CONTROL
release

CELEBRATE PEOPLE AND PLACE


STEWARDSHIP


NATURAL HISTORY


CULTURAL HERITAGE

Photo: Society for American Baseball Research

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