

Gills Creek Watershed Association

Annual Report

July 1, 2010 - June 30, 2011



Gills Creek Watershed Association
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The mission of the Gills Creek Watershed Association is to restore and protect the Gills Creek watershed by uniting citizens, government, organizations, and business.

Executive Summary

The Gills Creek Watershed Association (GCWA) was originally formed in the late 1990s by a group of citizens who noticed a decline in water quality in the Lake Katharine area. With the support of Richland County in 2006 and 2007 the GCWA reformed with a major focus on comprehensive watershed management. Since 2007, the GCWA has been working to improve its organizational structure, create a strong and dedicated membership base, implement stream and lake restoration projects, and advocate for policy changes to improve water quality. The GCWA had a number of major milestones in 2010 including completion of the first restoration project and the creation of our three year strategic plan. Additionally, GCWA has worked to engage citizens and residents in the watershed on how to best protect and restore Gills Creek. Some of our major accomplishments for FY 10/11 include:

- Participation in 10 events with thousands of people in attendance; provided educational information about the watershed, major pollutants which impact water quality, and how people can become more involved.
- Presentations at 16 meetings with over 400 people in attendance. These meetings included neighborhood and homeowner associations, civic groups, church groups, and conferences.
- A variety of stream clean-ups that resulted in the removal of 107 bags of trash and several tires from Gills Creek.
- Recruitment of 280 members to the GCWA.
- Successful completion of the first Gills Creek restoration project on Cary Lake.

The GCWA appreciates the hard work and dedication from our volunteers, board members, and staff in the many accomplishments of FY 10/11 and look forward to many more accomplishments in the years to come.



Gills Creek Behind Trenholm Plaza

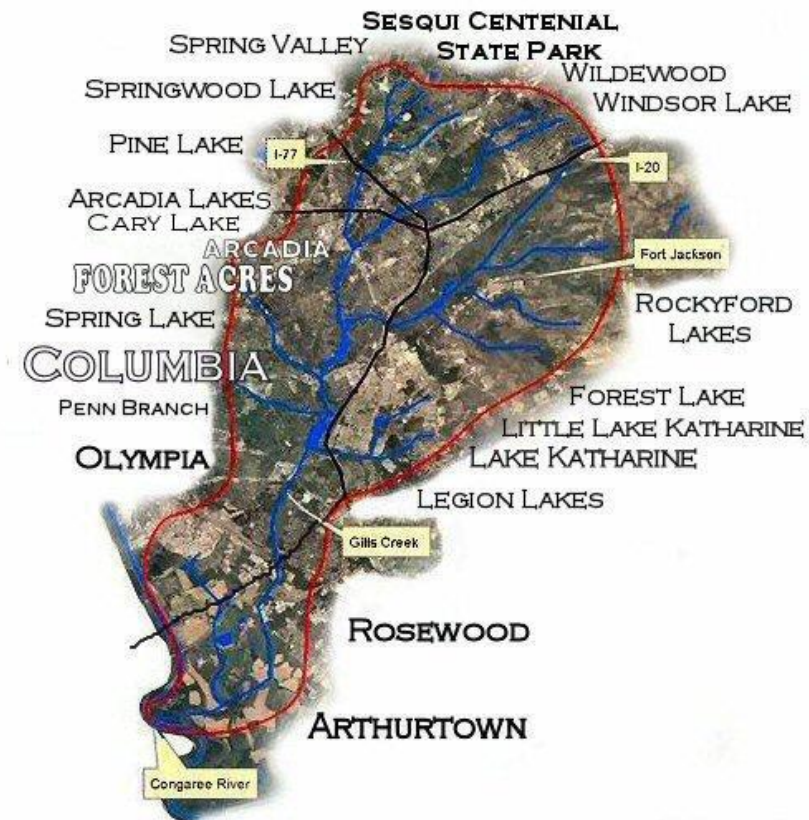
GCWA Annual Report Fiscal Year 10/11

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Location

The Gills Creek watershed is 76 square miles in area, and contains approximately 70 miles of streams and over 47,000 acres of land that lies within Richland County and Fort Jackson, South Carolina. The headwaters of Gills Creek begin at Hughes Pond, northeast of Sesquicentennial State Park and continue south through Fort Jackson. A major tributary of Gills Creek is Jackson Creek which begins north of Sesquicentennial State Park and is impounded to form Centennial Lake. Jackson Creek and Little Jackson Creek flow south through a highly urbanized area consisting mainly of residential neighborhoods and shopping centers. These streams are impounded multiple times to create Springwood Lake, Windsor Lakes, Cary Lake, and Arcadia Lakes. After flowing through a largely undeveloped tract of Fort Jackson, Gills Creek is impounded to create the Rockyford Lakes before meeting with Jackson Creek at Forest Lake. The final major lake in the watershed is Lake Katharine. Downstream of Lake Katherine, Gills Creek flows freely through a variety of residential, agricultural, and commercial land uses until its confluence with the Congaree River south of Interstate I-77.



Water Quality Concerns

Richland County, South Carolina has experienced a substantial amount of growth in the last forty years. The population increased from 200,102 in 1960 to 372,023 in 2009 and the increase of growth during the years 2000-2009 was 16% (U.S. Census Bureau, 2010). Residents in this watershed have noticed rapid degradation of the waterbodies in Richland County including impaired water quality, siltation of lakes and ponds, bank erosion and litter that may be attributable to this increase in growth.

Waterbodies in the Gills Creek watershed are classified as freshwater, which requires them to be suitable for primary and secondary contact recreation (SCDHEC, 2004). A waterbody is considered impaired for recreational uses, and will be added to the State's 303(d) list, if fecal coliform exceeds the state criterion of a geometric mean of 200cfu/100ml, based on five consecutive samples during any 30 day period or if no more than 10% of the total samples during any 30 day period exceed 400cfu/100ml (SCDHEC, 2010). Aquatic life support is determined by comparing dissolved oxygen, pH, toxicants, nutrients, and turbidity levels to a State criterion. If any one of these parameters does not meet the criterion, then the waterbody is listed as impaired for aquatic life uses (SCDHEC, 2008). State criterion for dissolved oxygen levels are a daily average of not less than 5 mg/l with a low of 4 mg/l (SCDHEC, 2010).

Until 2010, The South Carolina Department of Health and Environmental Control (SCDHEC) collected samples at four water quality monitoring stations within the watershed. Two were located on Gills Creek (C-017 and C-001), one on Forest Lake (C-068), and one on Windsor Lake (C-048). Three of the four stations have exceeded various SCDHEC numeric criteria resulting in those waterbodies being listed as impaired and placed on the State's 2010 303(d) list. Both sites located on Gills Creek are impaired for recreational uses due to an exceedance of fecal coliform concentrations. At the down-stream Gills Creek site (C-017) aquatic life uses are also not supported as a result of low dissolved oxygen (DO) levels. Forest Lake (C-068) is impaired for fish consumption caused by high mercury levels (SCDHEC, 2010). Since 2010, SCDHEC has reduced the amount of sampling sites to only include the site furthest downstream, C-001.



Hughes Pond, Gills Creek headwaters

In May 2009, the Gills Creek Watershed Management Plan was completed by BP Barber and Tetratech. The management plan is to be used as a comprehensive guide to identify and address water quality problems throughout the watershed. The management plan divides the watershed into 17 sub-watersheds and prioritizes them based on SCDHEC reporting, use designations, stakeholder information and Geographic Information Systems (GIS) mapping. This information was compiled and reviewed by BP Barber and Tetratech and the following major watershed concerns were identified:

- “Flooding - Flooding hazards exist that endanger human life and have caused or may cause property damage in the future;
- Sedimentation - Streams, lakes, and other waterbodies have and continue to receive excessive sediment loads during storm events, which reduce the aesthetic and recreational value of these waterbodies and impact fish and other aquatic life;
- Trash - Streams and other waterbodies contain excessive amounts of trash which reduce the aesthetic and recreational value of the watershed, endangers wildlife, and threatens to clog infrastructure;
- Water Quality and Aquatic Ecosystems - Water quality degradation in streams and other waterbodies has impaired designated uses and threatens human health as well as aquatic life;
- Wildlife - Wildlife habitat has significantly declined, and some remaining wildlife habitat is currently unprotected” (BP Barber and Tetratech, 2009).

The management plan then identifies the most applicable management strategies to be implemented in each subwatershed. The following management strategies were considered:

- “Stormwater BMP Retrofits - Best Management Practices (BMPs), either structural or nonstructural, that are implemented within existing development to reduce impacts from stormwater runoff;
- Stream and Riparian Buffer Restoration - Revegetation and/or restructuring of a stream channel, banks, and/or floodplain area to reduce high flows, downstream flooding, and erosion and to restore the biological and water quality functions of a stream;
- Preservation - Acquisition and permanent protection of undisturbed natural areas to protect wildlife habitat and downstream water quality;
- New Development Policies - Requirements or other policies to encourage control and treatment of stormwater runoff from new development to protect watershed functions, including water quality and aquatic habitat;
- Other Policies and Outreach - Programs implemented to educate watershed citizens and promote watershed protection efforts” (BP Barber and Tetratech, 2009).

Purpose of Organization

The Gills Creek watershed lies within six different jurisdictions: 41.48% in Richland County, 36.66% in Fort Jackson, 14.84% in Columbia, 6.18% in Forest Acres, 0.84% in Arcadia Lakes and a small portion in the City of Cayce. Each of these jurisdictions has their own land use policies, including plans for growth, zoning regulations, and sediment and erosion control regulations. The GCWA is a group of interested citizens, stormwater managers, and conservationists who are focused on the rehabilitation of the Gills Creek watershed. The goal of the GCWA is to bring together the different jurisdictions in the watershed to restore and protect the watershed through implementation of the management plan, to improve and enforce stormwater regulations, to preserve land along the banks of the streams, and increase public awareness of local water resources.

Mission Statement

The mission of the GCWA is to restore and protect the Gills Creek watershed by uniting citizens, government, organizations, and businesses.

Vision

By 2018 the Gills Creek watershed is a national model for watershed management and planning. Citizens are enjoying the bike and walking trails throughout the watershed while it serves as the basis for an environmental education curriculum for Richland County Schools. All new development is carefully studied for its impact on the watershed, and many of the mistakes of the past have been corrected. The stream corridors have received special attention, accommodate diverse wildlife and natural flows and capacities have been restored. Water quality is much improved and best management practices are working. An example is there has been no net loss of pervious surfaces, in fact, there has been a measurable reduction in impervious surfaces in the past 3 years. Current codes reflect strong support from the public and encourage “green” development. The watershed is litter free and sedimentation in the lakes has been drastically reduced. A task force composed of governmental representatives and citizens is a model for a coordinated approach to planning, regulation and development in an environmentally sensitive area.

Strategic Plan

To guide the course of the GCWA in achieving its vision, a strategic planning initiative was made in 2007 under the auspices of the Clemson Institute for Community Economic Development. By late 2009, the Board determined that an updated Strategic Plan would be in order, as most of the goals and objectives of the first plan had been achieved. A Planning Committee was formed and began meeting in January 2010. Diana Toledo of the River Network provided facilitation of this work, including a Board retreat held in June 2010. The Plan was presented to the Board and officially adopted in December 2010.

The Planning Committee began by interviewing 16 stakeholders who had diverse experience in working with the GCWA. From these interviews, a list of critical issues was developed to focus the assessment of the current effectiveness and future orientation of the GCWA. These issues then served as the ‘fodder’ for the Board retreat, which provided a general Board consensus on a set of Goals for the GCWA to concentrate its work in the next few years. Following the retreat, the Planning Committee then generated this Plan of more detailed Objectives and Activities associated with them. Interim versions of the Plan were reviewed and revised by individual Committee Chairs as appropriate.

An initial set of five goals emerged to address the work GCWA should undertake to advance its mission. Two additional goals were articulated to deal with internal organizational issues. As it developed, the goals had a good fit within the existing Committee structure, with little need to re-organize at that level. The Plan attempts to map out how these Committees can work most effectively and efficiently as a young organization with limited resources.

The Goals for this Strategic Plan are as follows:

Goal #1: Improve water quality, wildlife habitat and recreational opportunities in the Gills Creek watershed by promoting and implementing restoration projects that engage and benefit the community.

Goal #2: Inform and educate decision-makers and stakeholders in the watershed about the importance of effective watershed management and actions they can take to protect and restore the Gills Creek watershed.

Goal #3: Serve as a respected advocate for stormwater management and land use practices that will improve water quality in the Gills Creek Watershed.

Goal #4: Increase GCWA membership on a sustained basis and engage members and the larger community in GCWA’s mission and programs.

Goal #5: Develop a financial management system and a sustainable fundraising strategy to support GCWA programs and staff and to implement this strategic plan.

Goal #6: Develop strong and active committees that implement GCWA programs, engage the community, and develop GCWA future leadership.

Goal #7: Develop GCWA Board of Directors to include a number of strong leaders and a membership that understands and fulfills its roles and responsibilities as Directors.
Board of Directors Events and Activities



Blue Heron on Spring Lake



Snow day on Spring Lake

Board of Director Events and Activities

Board Meetings

Board meetings are held on the second Thursday of every month for approximately two hours. During FY 10-11, a meeting took place each month except July.

Annual Meeting

October 13, 2010

All GCWA members and interested parties were invited to this meeting. A presentation was given about the status of the organization, votes were taken regarding changes to the by-laws and all current board members were elected by the members in attendance.

Wine for Water Fundraiser

July 18, 2010

This event took place at Cook's Mountain in Eastover, SC. It included wine and beer tasting, heavy hors d'oeuvres, information about GCWA, and guided hikes through the property. Approximately 150 people attended this event.

Urban Paddle and Picnic

June 12, 2011, Lake Katharine

This event took place at the Lake Katharine boat ramp. Attendees were able to kayak or canoe on Lake Katharine. This was followed up with box lunch on the shoreline of Lake Katharine.



Participants canoeing in Lake Katharine

Committees

The work of the Board is guided by the Executive Committee, composed of the officers, chairs of committees and the past president. Current members of the Executive Committee are Emily Jones, David Tuttle, Carol Kososki, Dan Tufford, Pam Greenlaw, Pete Mayers, and Elliott Powell. The current committees are Education, Technical, Financial Stewardship, and Membership.

Committee leadership and activities are summarized as follows:

Education Committee

Pam Greenlaw, Chair

The responsibilities of the Education Committee are to reach out to interested citizens and residents about the work of the GCWA and educate citizens about how they and other activities impact water quality. The Education Committee also assists the Membership Committee in recruiting new members and volunteers to the association.

Accomplishments include:

Events and Festivals

The Education Committee has worked to spread the message of the GCWA by attending a variety of public events. Below is a list of events that the GCWA attended and the Education Committee helped organize. The Education Committee also created a professional table display to educate people about the GCWA, the location of the Gills Creek watershed, and the water quality problems in the watershed.

Table 1: Events Attended

Event	Date	Attendance
Summer Celebration of Water	8/28/2010	1200
St. John Neuman Health Fair	9/12/2010	100
Forest Acres Green Festival	9/25/2010	1500
Richland Co. Neighborhood Planning Conference	10/2/2010	125
Sweet Seasons Festival	12/2/2010	300
Farmville	4/9/2011	
Rosewood Crawfish Festival	4/30/2011	
Sparkleberry Fair	4/30/2011	30,000
FLPC Earth Sunday	5/15/2011	50

Presentations

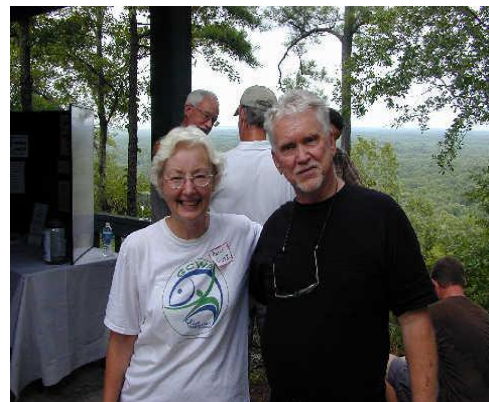
The GCWA Education Committee helps to organize presentations to a variety of groups within or outside of the watershed. The time and detail of the presentations vary depending on the needs of the group. Topics covered generally include information about the GCWA, where the watershed is located, and discussion of specific pollutants such as fecal coliform (FC), sediment, and dissolved oxygen (DO).

Table 2: Presentations

Organization	Date	Attendance
Forest Lake Property Owners Association	10/14/2010	15
Dent Middle School	10/29/2010	25
USC Political Science Class	9/13/2010	20
Lake Katherine HOA	9/14/2010	20
Garden Club Council	9/27/2010	50
RC Conservation Commission	9/27/2010	10
Golden Kiwanis Club	10/13/2010	50
St. David's Church	2/16/2011	16
St. Mark's Woods HOA	2/21/2011	20
USC Geology Class	3/23/2011	20
USC Lunch and Learn	3/24/2011	30
USC Meet and Greet	3/29/2011	15
Dent Middle School	3/29 & 3/31	64
Sustainability Across the Curriculum	5/10/2011	20
Spring Lake HOA	5/17/2011	15
Brookfield Neighborhood Association	5/19/2011	20



Guests and host of 1st Annual Wine for Water



Board Members Carol Kososki and Pete Mayers

Newsletters

The Big Splash, GCWA’s e-newsletter, is distributed monthly to a list of approximately 400 people. E- Newsletters typically include information about upcoming events, current stormwater events, education on stormwater, and acknowledgment of projects and/or volunteers. A newsletter has been sent each month of FY 10-11. Copies of the newsletters can be found on our website.

Clean-ups

The GCWA regularly partners with Keep the Midlands Beautiful (KTMB) to help organize clean ups around the watershed. Some of these clean ups are organized through their Adopt-A-Waterway program while others are organized as a one-time clean up.

Table 3: Trash pick-ups organized

Lead Organization	Volunteer Group	Location	Date	Trash picked up	Volunteer Attendance
GCWA	Cary Lake HOA	Cary Lake	2/19/2011	20 bags of trash and 6 bags of recyclables	23
Dent Middle School	Dent Middle School and Benedict College	Jackson Creek behind Decker Blvd	4/2/2011	29 bags of trash	
GCWA	USC students and Forest Lake residents	Forest Lake	2/12/2011	25 bags of trash	23
GCWA	USC students	South Beltline	2/12/2011	27 bags of trash and 10 tires	14



Clean up on Cary Lake



Clean up on S. Beltline

Financial Stewardship Committee

Emily Jones, Chair

The responsibilities of the Financial Stewardship Committee Finance include advising the GCWA Board on financial matters, assisting the Program Coordinator in developing an annual budget, over-seeing an annual audit, filing of tax returns and advocating for GCWA funding, organize fundraiser events and seek other long-term financial sustainability.

Accomplishments include:

- Advocated for and received funding for continuation of facilitation services for GCWA;
- Organized the Wine for Water fundraiser event;
- Organized the Urban Paddle fundraiser event;
- Developed a fundraising plan.

Membership Committee

The goal of the membership committee is to recruit new members and engage current members in the mission and work of the GCWA. Members primarily include citizens that live in the watershed and have an interest in protecting water quality in Richland County. The membership committee works to set goals for membership numbers and strategies for achieving those goals.

From June 30, 2010 to July 1, 2011, the GCWA Membership Committee recruited 280 members, a 50% increase in membership from FY 09-10. This resulted in \$4,854 of membership revenue for the organization.

Technical Committee

Pete Mayers, Chair

The responsibilities of the Technical Committee include reviewing and coordinating technical projects in the watershed, reviewing and responding to regulatory matters such as TMDLs, NPDES and MS4 Permits, identifying potential restoration and water quality improvements, investigating citizen water quality complaints and providing technical guidance to the Board, Executive and Educational Committees.

Accomplishments include:

- Reviewed the technical aspects of storm water projects of Richland County and the City of Columbia including the Cary Lake Project, Devils Ditch Project and the Little Jackson Creek Project;
- Formed the Lake Katharine sub-committee to recommend a solution to sedimentation problems in the lake;
- Investigated formal complaints/concerns from citizens regarding potential violations of stormwater regulations.



Big and Little Lake Katharine

Financial Statement

This statement is the preliminary report from the Auditor for the FY 10-11.

INDEPENDENT ACCOUNTANT'S REPORT

The Board of Directors
Gills Creek Watershed Association
Columbia, South Carolina

We have audited the accompanying statement of financial position of Gills Creek Watershed Association (a non-profit organization) as of June 30, 2011 and the related statements of activities and cash flows for the year then ended. These financial statements are the responsibility of Gills Creek Watershed Association's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Gills Creek Watershed Association as of June 30, 2011, and the changes in its net assets and cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Hamilton, McKinney & Moss
Columbia, South Carolina
September 23, 2011

GILLS CREEK WATERSHED ASSOCIATION

STATEMENT OF FINANCIAL POSITION

JUNE 30, 2011

ASSETS

Current Assets

Cash and cash equivalents	\$ 17,817
Accounts receivable	7,200
Prepaid insurance	1,605
Total Current Assets	26,622

Property, Plant and Equipment, net - Note B	1,346
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Total Assets	27,968
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LIABILITIES AND NET ASSETS

Current Liabilities

Accounts payable	6,100
Total Current Liabilities	6,100

Net Assets

Unrestricted	21,868
Temporarily restricted	-
Permanently restricted	-
Total Net Assets	21,868

Total Liabilities and Net Asset	\$ 27,968
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Conferences and Workshops Attended

EPA Brownfields Conference - July 20-22 Jacksonville, FL
SC River Forum - October 15th, Columbia, SC
River Network's River Rally - June 3rd- 6th N. Charleston, SC
Social Media for nonprofits - June 14th Columbia, SC

Special Projects

Strategic Planning

Beginning in December of 2009, the GCWA sought the assistance of the River Network to develop a strategic plan. A planning committee was formed and a board retreat was held in June 2010. The final three year strategic plan was approved by the Board of Directors in December 2010. The complete strategic plan can be found on the GCWA website.

Cary Lake Project

The Cary Lake Water Quality Improvement Project was implemented by Richland County in association with GCWA to address water quality concerns, particularly sedimentation and trash/debris that has accumulated over several decades in Cary Lake. Sediment was removed from two areas of Cary Lake. The first is the outfall area of Jackson Creek, where approximately 21,000 cubic yards was removed, equivalent to one to five feet of sediment depth, from an eight acre area. In addition, a trash boom was installed at this location.

The second outfall is at the Ashworth Pond Place (at Cary Lane). Approximately, 7,000 cubic yards of sediment was excavated equivalent to one to five feet of sediment depth from a three acre area.

Cary Lake Video

With a donation from the Cary Lake Homeowner's Association, the GCWA was able to document the construction work that took place at Cary Lake. The purpose of this video is to serve as a promotional video to explain the role of the GCWA. This video can be found on our website.



Cary Lake Project



Removing sediment on Cary Lake

Devil's Ditch Project

This project is the result of a coordinated effort among Richland County Stormwater Management, City of Columbia and GCWA in an effort to prevent further stream bank erosion of Devil's Ditch. The general scope of this project is to perform maintenance and repairs to the ditch including removal of overgrown vegetation, removal of accumulated sediment, and application of appropriate bank & bed stabilization to the ditch to prevent future erosion and scouring. Design work on this project is complete and construction is expected to begin in FY 2011-12.

Gills Creek Mitigation Bank Concept Plan

This project was funded through a Community Conservation Grant from the Richland County Conservation Commission. The results of this activity will be to create a Gills Creek Watershed Mitigation Bank concept plan. Mitigation results in an improvement to the condition of a stream and includes practices such as stabilization of channel banks, restoring a stream to its natural flows, buffer enhancement, preservation, etc. Consultants with the Dennis Corporation found several locations throughout the watershed that had mitigation potential and began initial assessments of these properties. The assessments will be compiled in a report to be used at a future date to develop a Gills Cree mitigation bank.

Conservation Easement Prioritization

This project was completed by two USC graduate students interns. The project involved developing a prioritization system for potential conservation easement sites within the Gills Creek Watershed. This system would allow the GCWA to determine which areas of the watershed would benefit the most from preservation and allow GCWA to pursue only the most beneficial sites. Implementation of this project using the developed system will likely take place with future USC interns.

Acknowledgments

Board of Directors

Emily Jones, Chair

David Tuttle, Vice Chair

Carol Kososki, Secretary

Dan Tufford, Treasurer

Elliott Powell

Michael Criss

Pam Greenlaw

Yancey McLeod

Leroy Bolton

Pete Mayers

Judy Timmons

Bernie Gaudi

Advisory Board Members

Anne McGovern, SC Department of Health and Environmental Control

Srinivas Valavala, Richland County

James B. Atkins, Richland County Conservation Commission

Jim Manning, Richland County Council

Staff

Jessica Artz, Program Coordinator

Interns

James Kilgo

Callie DeWeese

Webmaster

Lewis Kirk

Partner Organizations

Richland County

City of Columbia

Forest Acres

Arcadia Lakes

Sustainable Midlands

Richland County Stormwater Consortium

Richland County Conservation Commission

Keep the Midlands Beautiful

Sponsors

Dennis Corporation

Forest Lake Property Owners Association

Fuss & O'Neil

Spring Valley HOA

Upper Rockyford Lake HOA

Julie and Mark Mayson

Little Lake Katharine HOA

Intertape Polymer Group

Organizational Members

Spring Lake HOA

Cary Lake HOA

Lake Katharine HOA

References

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South Carolina Department of Health and Environmental Control. (2010). State of South Carolina 2010 Integrated Report Part I: Listing of Impaired Waters. Columbia, South Carolina. Bureau of Water

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