

Richland Creek Watershed Action Plan: Goal Objectives & Actions

WAP Goal: To reduce bacteria contamination in the Richland Creek Watershed by 82%.

Objective 1: Reduce peak stormwater flows by at least 25%					
Action #	Specific Action	Timeframe	Partners	Resources Needed	Evaluation Criteria
1-1	Implement identified stormwater control measure projects as highlighted in the <i>Southwest High Point Green Infrastructure Plan</i> (January 2019)	Short-Mid	PTRC, SWRF, City of High Point, Guilford Cnty, engineering firms, PCC	Funding, technical assistance, & staff time	# of SCMs installed, stormwater reduced, water quality data, value added (\$/ft/yr)
	Note: Utilize SWHP Green Infrastructure Plan and WIPS tool. Apply for 319 or other grant funding to support.				
1-2	Identify additional stormwater retrofit opportunities on public properties	Short	PTRC, SWRF, City of High Point, Guilford Cnty, engineering firms	Technical assistance & staff time	# of identified projects
	Note: Utilize SCM Suitability Model. Prioritize highly visible and/or publicly owned sites to promote education.				
1-3	Promote stormwater retrofits in future maintenance or redevelopment of publicly owned buildings, parks, parking lots and drainage systems	Ongoing	PTRC, SWRF, City of High Point, Guilford Cnty, engineering firms,	Staff time & training	# of SCMs installed, stormwater reduced, water quality data, value added (\$/ft/yr)
	Note: Work with partners to provide trainings/information sessions, host DIY rain barrel workshops, and encourage rain garden and/or cistern installation.				
1-4	Support the City of High Point's Urban Forestry Committee	Ongoing	City of High Point, SWRF, PTRC, KHPB	Technical assistance, staff time & funding	# of street trees planted
	Note: Work with Urban Forestry Committee and City staff to encourage volunteer tree planting.				
1-5	Encourage stormwater reduction measures on City streets in future capital improvement projects	Mid	PTRC, SWRF, City of High Point, Guilford Cnty, engineering firms,, landscaping companies, nurseries	Funding, technical assistance, staff time, & training	# of SCMs installed, stormwater reduced, water quality data, value added (\$/ft/yr)
	Note: Identify streets that are wide enough to accommodate SCMs. Adjust ordinances using Code & Ordinance worksheet to accommodate.				
1-6	Work with NC Department of Transportation to incorporate retrofits into highway upgrades	Mid-Long	City of High Point, Guilford County, NCDOT, PTRO	Staff time & technical assistance	# of SCMs installed, stormwater reduced, water quality data, value added (\$/ft/yr)
	Note: Coordinate with Piedmont Triad RPO.				
1-7	Develop cost share/incentive program to encourage SCMs on private property	Mid	High Point , Guilford County, SWRF, RCSW, WRC, SSMART, Commerce, businesses, & homeowners, PTRC	Funding, technical assistance, educational materials, & staff time	# of SCMs installed, funding provided (\$)
	Note: This could include financial assistance, development incentives, or recognition programs for both structural or non-structural SCMs.				

1-8	Map and inventory existing stormwater network	Ongoing	High Point, Guilford County, PTRC, engineering firms, NCDWR	Funding & technical assistance	# of outfalls/pipes mapped, # of maintenance needs detected
Note: Use SCITs tool to mark outfalls. PTRC also has experience mapping stormwater infrastructure.					
1-9	Work with businesses and homeowners to disconnect roof drains and/or to identify stormwater retrofit opportunities.	Mid	High Point, SWRF, Guilford County, SSMART, businesses, homeowners	Funding, educational materials, & staff time	# of roofs disconnected, volume of stormwater reduced
Note: Identify neighborhoods with direct roof drain connections. City could provide this service at no-cost to homeowners to incentivize.					
1-10	Reduce sources of I/I	Mid-Long	High Point Guilford County, PTRC, NCDWI, NCDWR, engineering firms	Funding, technical assistance, & staff time	# of repairs made, volume of I/I reduced
Note: Inventory stormwater and wastewater systems. Continue or expand testing to identify potential leaks, connections, or other maintenance needs.					
1-11	Continue to encourage the use of LIDs measures for new or redevelopment, as site appropriate.	Ongoing	High Point, Guilford County, GCCE, PTRC, WRC, UNC SOG, NCSU-Ext	Technical assistance, staff time, & elected official buy-in	Re-evaluation of CWP Code & Ordinance worksheet
Note: Utilize Code & Ordinance Worksheet. UNC School of Governments also has a model Phase II ordinance.; CHP survey areas where LIDs would be appropriate					
1-12	Incorporate watershed plan recommendations into other City/County plans	Ongoing	High Point, Guilford County, SWRF, PTRC	Staff time	Track # of action steps achieved since WAP
Note: In the process of area planning and early stages of updated Comprehensive Plan.					
1-13	Identify maintenance priorities for stormwater conveyance repairs and consider retrofits to increase infiltration.	Long-term	High Point, Guilford County Stormwater, PTRC, SWRF, NCSU	Technical assistance, funding, education	# of projects proposed or constructed
Note: Work with Adopt-a-Area to mark and identify storm drains, use SCITs app/tool to identify areas of need.					

Objective 2: Protect and restore riparian buffers along Richland Creek and tributaries

Action #	Specific Action	Timeframe	Partners	Resources Needed	Evaluation Criteria
2-1	Implement identified riparian buffer improvement projects using native plants	Short-Mid	High Point, Guilford County, SWRF, PTRC, WRC, property owners, landscaping companies, nurseries, NCDWR, NCLWF	Funding, technical assistance, stakeholder buy-in, & staff time	Linear feet of buffers, stormwater reduced, water quality data, value added (\$/ft/yr)
Note: Utilize Project Atlas and WIPS tool. Apply for 319 or other grant funding to support. Reference 2019 SWHP Green Infrastructure Plan.					
2-2	Stabilize eroding stream banks with native plants and materials	Mid	High Point, SWRF, Guilford County, PTRC, WRC, property owners, landscaping companies, nurseries, NCDWR, NCLWF	Funding, technical assistance, stakeholder buy-in, & staff time	Linear feet of stabilized streambank, water quality data, value added (\$/ft/yr)
Note: Replace hardened structures where feasible, utilize bioengineering, utilize natural stream channel design as appropriate					

2-3	Groundtruth riparian buffer assessment to identify additional riparian buffer improvement and stream restoration projects	Short	High Point , Guilford County, SWRF, PTRC, KHPB	Technical assistance & staff time	# of identified projects
Note: Utilize Riparian Buffer Assessment and WIPS tool.					
2-4	Reference <i>High Point Stream Improvement Planning and Feasibility Study</i> (June 2020) as compiled by the City parks to tackle streambank issues.	Mid-Long	High Point, Guilford County, PTRC, engineering firms	Technical assistance & staff time	# of concept design plans; # of implementation projects funded
Note: Target public parks in watershed (Macedonia Park, Harvell Park, and Blair Park Golf Course) as recommended in report. Secure funding.					
2-5	Partner with Parks & Rec to consider ecological restoration options for Richland Creek as it flows through Blair Park Golf Course.	Short-Mid	High Point, SWRF, PTRC, engineering firms	Staff time & elected official buy-in	Linear feet of riparian buffers protected, stormwater reduced, water quality data, value added (\$/ft/yr)
Note: Keep in mind playability of course, use as pilot project for community engagement.					
2-6	Eradicate invasive species in identified BMP locations prior to restoration, couple with extensive treatment regime	Short-Mid	High Point, Guilford County, licensed applicators/landscapers	Funding, technical assistance, staff & volunteers	# acres of invasive species removed & controlled
Note: Help establish reporting system for new crops of invasive populations in order to stay on top of issue utilize Adopt-a-Area program					
2-7	Identify buffers as a priority in other ordinances and plans	Short	High Point , Guilford County, PTRC	Staff time	N/A
Note: Subdivision, landscaping, comprehensive plan, recreation, etc.					
2-8	Develop cost share/incentive program to encourage businesses and homeowners to restore buffers on private property	Mid	High Point, Guilford County , GCSWCD, GCCE, NCSU-Ext, WRC, SSMART, Commerce, businesses, & homeowners	Funding, technical assistance, & staff time	# of participants, linear feet of buffers, funding provided (\$)
Note: This could include financial assistance, recognition &/or rebate programs such as 'River-friendly' type programs.					
2-9	Coordinate buffer improvements with floodplain protection, utility easements, and trail programs	Mid-Long	High Point, Guilford County, PTRC, PLC, PCC, PLT, MST, NCDOT, Duke, PNG, NCORR	Staff time	N/A
Note: Communicate with Duke on vegetation management options (reduce invasive, encourage use of native plants, replant with low-growing native)					

Objective 3: Identify and preserve under-utilized, abandoned parcels and open space.

Action #	Specific Action	Timeframe	Partners	Resources Needed	Evaluation Criteria
3-1	Work with Guilford County, City of High Point and other partners to prioritize and acquire land for conservation via easements or in fee-simple.	Short-Mid	SWRF, High Point, Guilford County, PLC, WRC, PCC, GCSWCD, GCCE, PTRC , NCDWR,	Technical assistance, staff time, & willing property owners	Acres of land conserved, stormwater reduced, water quality data, value added (\$/ft/year)

			CWMTF, private landowners		
	Note: Prioritize land in critical areas that provides multiple benefits.				
3-2	Use Code & Ordinance Worksheet to identify other opportunities to improve open space protections in City/County ordinances	Short	High Point, Guilford County, PTRC, WRC	Staff time	# of strengthened policies
	Note: Utilize the Green Growth Toolbox and trainings offered by WRC.				
3-3	Identify potential incentives to encourage open space preservation and/or acquisition of easements.	Short	High Point, Guilford County, PTRC, WRC	Technical assistance & staff time	Acres of land conserved, stormwater reduced, water quality data, value added (\$/ft/year)
	Note: Utilize Green Growth Toolbox and Code & Ordinance Worksheet.				
3-4	Implement floodplain protection and trail opportunities to meet conservation goals	Mid-Long	High Point, SWRF, Guilford County, PTRC, PLC, PCC, PLT, MST, NCDOT, NCCORR	Funding, technical assistance, & staff time	Acres of land conserved, linear feet of trail constructed
	Note: Implement SW Heritage Greenway				
3-5	Obtain funding to support creation of Southwest Heritage Greenway	Short-Long	SWRF, High Point, Guilford County, PLC, WRC, PCC, GCSWCD, GCCE, PTRC, NCDWR, CWMTF, private landowners	Funding, technical assistance, & staff time	Linear feet of greenway installed
	Note: Assist with identifying and obtaining funding or matching resources to design, and construct greenway				

Objective 4: Identification of sources of bacterial contamination.

Action #	Specific Action	Timeframe	Partners	Resources Needed	Evaluation Criteria
4-1	Work with Guilford County Health Department to identify areas of failing septic systems.	Ongoing	Guilford County Health Dpt, PTRC	Staff resources, technical assistance, funding	Track # of systems identified.
	Note:				
4-2	Obtain funding to offset costs of installing alternative on-site wastewater systems and/or investigate options available to homeowners.	Long-term	Guilford County Health Dpt, PTRC, NC Env Health	Technical assistance, staff time, & funding	Track # of systems retrofitted, replaced or repaired.
	Note: Investigate and/or apply for infrastructure engineering, design and funding.				
4-3	Increase education and outreach to homeowners about responsibility for on-site wastewater system maintenance and functionality.	Ongoing	Guilford County Health Dpt, PTRC, NCSU, NC Environmental Health	Funding, technical assistance, & staff time	# of promotional events or outreach campaigns
	Note: Promote Septic Safe week during September 20-24, 2021 as promoted by USEPA.				

4-4	Assist City in endeavors to further address public sanitary issues.	Ongoing	High Point, SWRF, Citizens	Technical assistance, staff time, & funding	# of areas of concern
Note: Enhance sanitary sewer overflow reporting process/system.					
4-5	Install additional pet waste stations in neighborhoods and/or parks	Ongoing	High Point, SWRF, Citizens	Staff, funding	# of stations installed and/or maintained
Note: Target informational hand-outs and dog-waste bags to residents, veterinary clinics and/or boarding facilities.					

Objective 5: Continue and expand water quality monitoring in watershed.

Action #	Specific Action	Timeframe	Partners	Resources Needed	Evaluation Criteria
5-1	Encourage sharing of Upper Cape Fear River Basin Association coalition data with appropriate High Point staff and departments.	Ongoing	PTRC, UCFRBA	Staff time and connections	Track communication avenues with City.
Note: Increase communication and sharing of data with High Point Stormwater Dpt., especially regarding bacterial issues.					
5-2	Incorporate more consistent sharing of sampling data and results amongst partners for sake detection of issue concerning WQ.	Ongoing	High Point, PTRC, UCFRBA	Technical assistance, staff time, & funding	Creation of feedback loop; # of communication/meetings
Note: Work with existing WAP partnership to periodically update/review water quality data.					
5-3	Research technologies appropriate to better identify source of fecal coliform impairments.	Ongoing	High Point, PTRC, academic partners	Funding, technical assistance, & staff time	# of studies or students involved with sampling
Note: Consider working with academic partners for fecal source tracking, documentation, and/or data collection for informational purposes.					
5-4	Offer NCDWR- WIPS and SCITS trainings for application of app in field	Ongoing	High Point, PTRC, academic partners, local partners (SWRF)	Funding, technical assistance, & staff time	
Note: Educate and train High Point staff to use SCITS, WIPS tools; offer training to public for citizen science support.					

Objective 6: Enrich public information and educational activities.

Action #	Specific Action	Timeframe	Partners	Resources Needed	Evaluation Criteria
6-1	Support Southwest High Point Renewal Foundation's Green Infrastructure plan.	Short-Mid	High Point, Guilford County, SWRF, PTRC, KHPB, NCDWR, SSMART , engineering firms, etc.	Staff time, stakeholder buy-in, funding	# of projects completed
Note: Direct connection of green infrastructure projects to water quality improvements along greenway footprint.					
6-2	Promote NC StreamWatch & High Point's Adopt-a-Stream volunteer opportunities.	Ongoing	High Point, Guilford County, SSMART , KHPB, NCDWR, afterschool programs, scouts, etc.	Technical assistance, staff time, & willing volunteers	# of volunteers, level of interest in program, # of streams monitored, citizen science data
Note: Expand stormwater partnerships to reach broader audience and community groups.					

6-3	Install educational signage at SCM project sites and stream crossings	Short-Mid	High Point, Guilford County, SWRF PTRC, PTRPO, SSMART, NCDOT, NCDWR	Funding, technical assistance, & staff time	# of signs installed
	Note: 319 funding can be used for educational signage, engage art community in design and/or funding.				
6-4	Continue partnership with Guilford County Stormwater and PTRC Stormwater SMART programs to broaden direct marketing campaigns.	Ongoing	High Point, Guilford County, SWRF, SSMART, GCSWCD, GCCE, KRHP, schools	Technical assistance, staff time, funding	# of programs/events, # of people reached, public buy-in
	Note: Seek partnership funding for larger promotional avenues.				
6-5	Tailor messaging and explore other forms of media to reach diverse audiences	Ongoing	High Point, Guilford County, SSMART, GCSWCD, GCCE, KHPB, schools	Technical assistance & staff time	# of new people reached
	Note: Make sure messaging is available in multi-lingual formats.				
6-6	Work with Keep High Point Beautiful (KHPB) and other partners to reduce litter, pet waste, and pesticide/fertilizer use in watershed	Ongoing	High Point, Guilford County, SWRF SSMART, KHPB	Technical assistance & staff time	Lbs of litter reduced, fecal coliform data, public buy-in
	Note: Help cross promote need for community engagement, especially in southwest region of watershed.				
6-7	Increase stewardship of creeks through passive recreation opportunities	Mid-Long	High Point, Guilford County, SWRF, PTRC	Funding, technical assistance, & staff time	# of new parks/trails
	Note: Utilize existing greenway and proposed SW Heritage Greenway				
6-8	Schedule good housekeeping training/workshops	Short	High Point, Guilford County, NCSU-Ext, PTRC, NCDWR	Staff time & training	# of trainings/workshops, # of staff trained
	Note: Keep group informed of upcoming trainings and/or opportunities for direct education.				
6-9	Promote online StoryMap and watershed applications	Short	High Point, Guilford County, SWRF, PTRC, NCDWR	Technical assistance & staff time	# of website visits, use of watershed applications
	Note: Cross promote and share link via PTRC website and High Point's social media avenues.				
6-10	Provide specific training opportunities to the City of High Point Parks & Rec staff	Ongoing	High Point, Guilford County, NCSU- Ext, PTRC, NCDWR	Technical assistance & staff time	# of trainings/workshops, # of staff trained
	Note: Work with City staff to determine priority training needs as related to stormwater, streams, water quality.				
6-11	Work with City of High Point Stormwater Management Staff to gain knowledge in applying low-impact and/or green infrastructure options	Ongoing	High Point, Guilford County, NCSU- Ext, PTRC, NCDWR	Technical assistance & staff time	# of trainings/workshops, # of staff trained
	Note: Keep group informed of upcoming trainings and/or opportunities for direct education.				

Display Week:

					Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8				Year 9				Year 10					
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