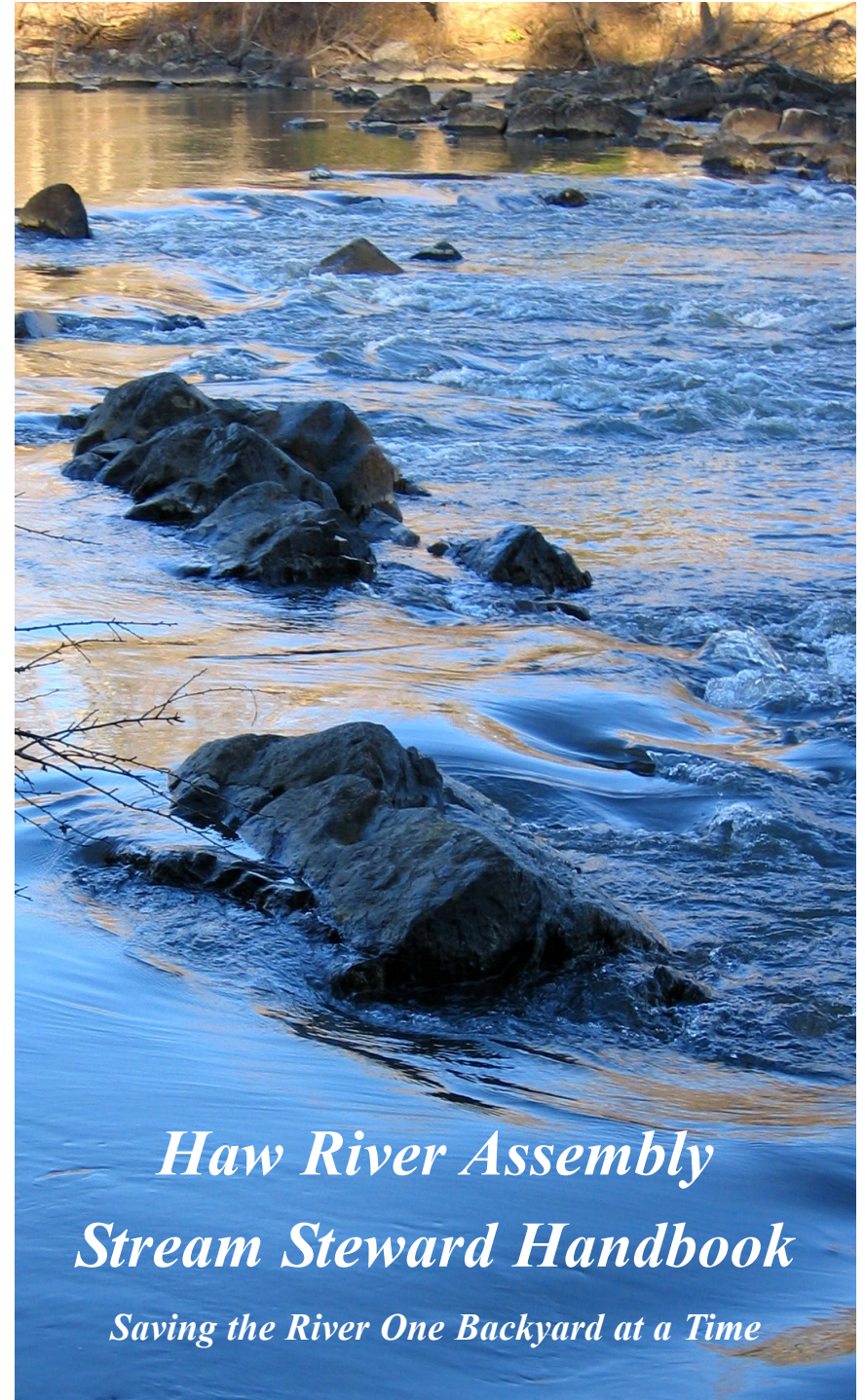


**Haw River Assembly**  
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919-542-5790



*Haw River Assembly*  
*Stream Steward Handbook*  
*Saving the River One Backyard at a Time*

***This handbook was created by the Haw River Assembly for the Stream Steward Campaign.***

*We are grateful to the N.C. Department of Environment and Natural Resources Nonpoint Source Program and the Z. Smith Reynolds foundation for their generous support in making this booklet possible.*

Thanks to: Stream Steward Coordinator, Catherine Deininger for writing the handbook; Cynthia Crossen for editing and compiling; Ken Crossen for help with the Haw River watershed map; Debbie Roos (Agricultural Extension Agent, Chatham County), Tom Gerow (Forester, Nonpoint Source unit for N.C. Forest Resources), and Steve Steinbeck (DEH Onsite Wastewater Section) for their expert comments; Cam McNutt (DWQ) for Impaired Streams data; Emma Skurnick for illustrations; Jan Burger for the Stream Steward logo on the back cover; Susan Yarnell for editing resource numbers; other Riverwatch Steering Committee members Deborah Amaral (Chair), Elaine Chiosso, Allison Weakley, Kim Colvin, and Kevin Meehan for reviewing and editing.

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**Glossary of Stream Terms**

**Riparian buffer** is the land adjacent to streams where vegetation is strongly influenced by the presence of water.

**Stormwater runoff** can be any water caused by rain, melting snow, or simply a hose that hasn't been turned off, that flows across the ground or an impervious surface, picking up pollutants.

**Stream** is a body of concentrated flowing water in a natural low area of the land surface.

**Streambank erosion** is when a streambank is worn away by increases in water flow.

**Watershed** is the land area that drains water to a given stream, lake, or ocean.

**Stream Steward Handbook**

*Saving the River One Backyard at a Time!*

This handbook has been prepared for your use by the Haw River Assembly's Stream Steward Campaign to explain how your actions can protect and improve streams in your watershed. We hope you will adopt the practices described in this booklet and encourage your family and friends to join our watershed protection campaign. Inside you will find:

<i>How Healthy is Your Creek?</i>	<i>.....2</i>
<i>Keep Your Creek Healthy at Home</i>	<i>.....4</i>
<i>Farming Practices that Help Keep Creeks Healthy</i>	<i>.....6</i>
<i>Map of Impaired Streams in the Haw River Basin</i>	<i>.....8</i>
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Within a watershed, as natural landscape is developed, paved, logged, or turned into farmland, less rainfall soaks into the ground and more stormwater flows directly into our rivers and creeks. This stormwater runoff generally carries debris and pollutants such as the chemicals we use on our lawns and the oil and dirt from our streets.

Equally damaging is the physical impact to the creeks due to the increased amount of stormwater. Surges in stormwater erode streambanks, demolish streamside vegetation, and widen stream channels. All this damage to the streams hurts the wildlife that lives in and around waterways. We also suffer from a lack of clean water for drinking and recreation when we fail to care for our creeks.

While you may have little control over the entire watershed, the actions you take in your own backyard can prevent and reduce harm to your local creek. Adopt healthy stream practices in your own backyard. Participate in community programs to recycle and dispose of wastes properly. Alert local officials or groups such as the Haw River Assembly of any dumping of inappropriate materials into storm drains or creeks or of sediment erosion from upstream.

## How Healthy is Your Creek?

Many creeks have been altered, channelized, or piped underground. Others have become victims of excessive sedimentation, sewage, reduced water flows, and dumped debris. While intact creek ecosystems continue to thrive in some places, few if any of the streams in the Haw River watershed have survived in a pristine, natural state. Yet, creeks are resilient. With care and stewardship, the health of a creek can rebound.

### Signs of a Healthy Creek

#### Water Quality and Flow

- ☺ Cool, clear water free of trash and excess algae
- ☺ Varied flow cycles

#### Creek Bed and Banks

- ☺ Stable vegetated banks with minimal erosion
- ☺ Presence of both slow pools and fast water running over shallow rocky stretches
- ☺ Abundant rock and clean pebbles of various sizes (critical for water critters)

#### Plants and Wildlife

- ☺ Native tree canopy and vegetation which stabilize streambanks with root systems, provide habitat for wildlife, and keep water temperatures cool for fish
- ☺ Thriving water bugs (aquatic macroinvertebrates), crayfish, and mussels
- ☺ Natural debris (leaves, branches, etc.) within the streambed and along the banks that provides food to water critters



A thriving creek ecosystem is a diverse habitat where you will encounter a range of conditions. Stream characteristics vary depending upon where you live. Water flow and characteristics of the creek banks, streambed, vegetation and wildlife also vary naturally along the length of each creek. For example, a healthy creek may be an intermittent stream that does not flow year-round. Understanding how your creek and property fit into the overall ecosystem will help you protect the watershed.

To learn how to assess the health of your local creeks, you can join or establish a Haw River Assembly River Watch Monitoring Team. Help keep our streams healthy and beautiful by participating in stream cleanup days.

### Symptoms of an Ailing Creek

#### Water Quality and Flow

- ☹ Excessive algae, constantly cloudy water, surface scum or foam, visible pollutants such as oil or dyes, strong odor of chemicals, animal waste or sewage
- ☹ High water temperatures
- ☹ Reduced water flow
- ☹ Big surges of stormwater during rain

#### Creek Bed and Banks


- ☹ Loss of natural creek channel due to straightening or moving of creek
- ☹ Excessive erosion along creek banks or deeply cut streambed and lots of silt blocking stream flow
- ☹ Still water; absence of pools, riffles, or clean gravel
- ☹ Litter, yard clippings, trash and other dumped debris in creek

#### Plants and Wildlife

- ☹ Invading non-native plants along streambanks that compete with native species
- ☹ Lack of diversity in vegetation
- ☹ Barren creek banks
- ☹ Few or no fish and only pollution-tolerant species of water bugs



## Keep Your Creek Healthy at Home

 **Everyone lives in a watershed, and almost everything that is dumped on the ground will eventually end up in a stream!**

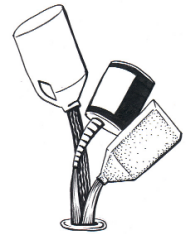
### Control Runoff from Your Yard

- ◆ **Avoid mowing right up to creek bed.** *Let the native trees and shrubs grow along stream banks for stabilization and to provide shade and habitat for native wildlife.*
- ◆ **Don't let exposed dirt in your yard run off into a stream.** *Prevent erosion and replant exposed areas right away. Mud is pollution too – it can suffocate fish and other water critters when it runs into the stream.*
- ◆ **Use porous materials for your driveway, yard, and landscaping** *to allow water to seep into the ground.*
- ◆ **Practice sensible pest control.** *Overuse of pesticides increases the chemicals washed downstream and does not benefit the plants. Also pesticides can eliminate all bugs. Discourage harmful garden bugs by encouraging helpful bugs and animals.*
- ◆ **Be careful with fertilizers, which can hurt wildlife by overwhelming streams with high nutrient levels.**
- ◆ **Make sure rain gutters and other pipes do not carry water directly into a creek.** *Runoff from roof surfaces carries contaminants that contribute to the decline of creek health. Pipes projecting directly into a creek bank cause erosion. Consider collecting rainwater in a cistern or rain barrel for use on ornamental gardens and lawn.*
- ◆ **Contact your local power company to request a No-Spray-Zone under your power lines.** *Utility companies use chemical herbicides to kill plants under power lines. These chemicals will destroy any creekside vegetation the power lines cross and are harmful to water critters.*



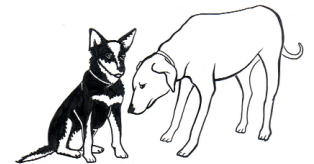
## Maintain a Healthy Septic System

- ◆ **Have your system pumped every 3 to 5 years.** *Domestic wastewater from a failed septic tank can cause water quality problems for surface and groundwater due to high levels of nitrate and phosphate.*
- ✖ **Don't poison your system by pouring down the drain harmful chemicals such as solvents, oils, paints, thinners, disinfectants, pesticides and poisons.** *They can kill bacteria that help purify sewage and they can also contaminate groundwater. Call your local Waste Management Office to find out where they collect leftover paints, pesticides, and other chemicals for disposal.*
- ◆ **Dispose of all wastewater in an approved system.** *Don't use a separate pipe to carry wash water to a small creek or the woods. This greywater may contain soaps (or other chemicals) and germs.*




### Dispose of Wastes Properly

- ✖ **Don't dump anything down storm drains.** *Storm drains often flow directly into local streams. Dispose of used automotive oil at the local recycling center.*
- ◆ **Avoid hosing down paved surfaces or washing your vehicle in the driveway or street.** *Even "biodegradable" soaps are toxic to fish and wildlife. Wash vehicles on grass or other unpaved areas. Or, use car washes where the water is recycled.*
- ✖ **Drain your pool or hot tub into landscaping after letting the chlorine dissipate for a week or two.** *Don't use copper-based algicides. Chlorine and copper algicides used in swimming pools and spas are toxic to aquatic life and other wildlife.*
- ◆ **Clean up after pets on sidewalks, patios, or gutters so that their waste will not wash into surface waters.** *Dog and cat feces add excessive nutrients and bacterial pollution to water, which decrease water quality. Horse and livestock manure also harms water quality when washed into streams.*
- ◆ **Watch the creeks and storm drains in your neighborhood.** *Report, to appropriate authorities, any spill or discharge other than rainwater, including gasoline and water leaching from waste piles.*



## Farming Practices that Help Keep Creeks Healthy



 **High nutrient levels in waterways will stimulate unwanted algae growth and degrade stream health**

### Carefully Manage Application of Fertilizers

- ☠ **Do not overapply nutrients in a quest for unrealistic yield goals.** Instead have your soil tested and follow soil test recommendations on amount of nutrients, if any, your soil needs. Excess nitrogen dissolves in water and is transported to streams by runoff. Excess phosphorus is held tightly by clays and can be carried into streams by erosion. Use leguminous cover crops to supply slow-release nitrogen and improve soil quality.
- ◆ **Apply nitrogen and phosphorus correctly.** Promptly incorporate fertilizer into soil by disking, plowing, or rotary tilling to decrease loss due to erosion or runoff. Be careful to apply fertilizer only to crop areas. Do not apply fertilizer when it is windy which can cause fertilizer to blow outside of crop areas. Do not spread fertilizer just before it rains.
- ◆ **Time nitrogen application appropriately.** Nitrogen should be applied in small amounts as needed. Fall application of nitrogen for spring-planted crops is not recommended in North Carolina because the nitrogen is likely to be leached from the soil during the winter.

### Limit Use of Pesticides or Herbicides

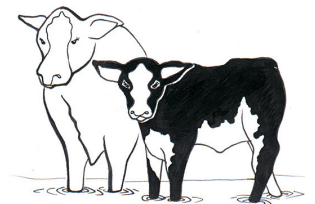
- ☠ **Do not rely only on chemicals to control your pest and weed problems.** Pesticides and herbicides may poison aquatic life if they are washed into streams. If you do use these chemicals, try the least toxic products first.
- ◆ **Use cultural practices to prevent pest problems whenever possible.** Rotate crops, plant pest-resistant varieties, encourage biodiversity and beneficial insects, practice good sanitation, use compost and mulch, alternate rows with herbs, and provide water and houses for pest-eating birds and bats.

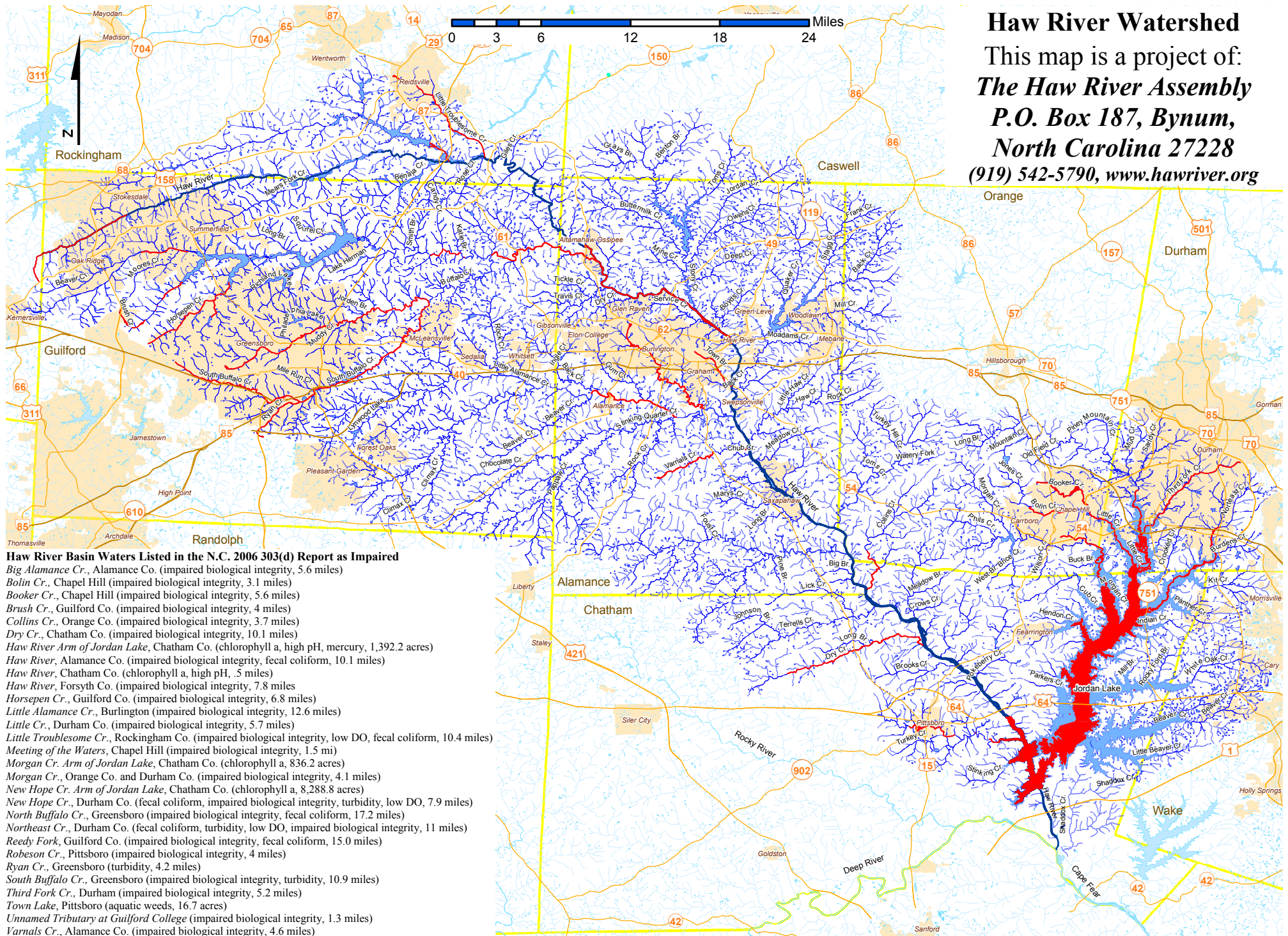
### Control Erosion

- ◆ **Maintain a soil cover.** Leave crop residues on the soil surface during the winter. Do not till too early in the spring. Consider use of a cover crop to trap and recycle nutrients for use by later crops.
- ◆ **Manage the soil for maximum water infiltration and storage.** Increase soil's water-holding capacity by adding organic matter and by aerating soil to increase water absorption.
- ◆ **Maintain vegetation on ditch banks and in drainage channels.** If possible construct ditches larger than needed so the bottoms can be left vegetated to trap sediment and other possible pollutants.
- ◆ **Slope field roads towards the field and seed roads with a perennial grass cover when possible.** Water erosion and dust from traffic on field roads contribute significantly to soil loss and potential pollution of streams on farms.
- ◆ **Plow and plant crops along contour lines.** Plant crops in rows perpendicular to the slope of the field to save topsoil from erosion.
- ◆ **Shape and seed field edges to filter runoff as much as possible.** Do not plow up to the edge of the field. Leave a buffer strip along drainage ways and establish a perennial sod.

### Protect Waterways from Livestock Waste

- ◆ **Fence animals away from streams, drains and sensitive wetland areas.** If cattle and other livestock are allowed access to waterways their waste will be placed directly in the water, and animal traffic will cause soil disturbance and increased sediment.
- ◆ **Feed, water, and pasture areas where livestock congregate should be located so that runoff is filtered through vegetative buffer strips.** Even though vegetated buffers are highly effective at removal of excessive amounts of nitrogen, when manure accumulates at any site, it should be correctly applied to the land.



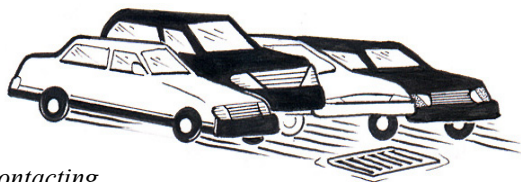


## How Your Business Can Help Keep Creeks Healthy

 **Storm drains flow into creeks, with no wastewater treatment!**

### Control Site Drainage

- ◆ **Control runoff from parking lots.** Strategic grading of parking lots and other outdoor spaces can prevent runoff from contacting potentially contaminated areas and reaching creeks. Sweep parking lots regularly. Clean up oil spills with dry cleanup methods. Installing oil water separators in catch basins will remove oil from runoff before it enters the storm drain. Use permeable surfaces such as gravel or permeable concrete block for parking areas whenever possible.
- ◆ **Check rain gutters and other pipes and make sure they do not drain directly into a creek.** Pipes projecting directly into a creek bank or flexible pipes allowed to drape down a bank cause erosion. Use cisterns, or on-site filtration of graywater systems, to capture roof runoff.
- ◆ **Consider installation of structural best management practices (BMPs) to control stormwater runoff from your business site.** Riparian buffers (vegetation areas alongside of streams) are very effective at removing all types of pollutants, including sediment, phosphorus, and nitrate. Other BMPs include ponds, stormwater wetlands, infiltration trenches, bioretention areas, and grassy swales. (For more information on these BMPs, obtain a copy of “Urban Waterways, Urban Stormwater Structural BMPs” from NC Cooperative Extension.)



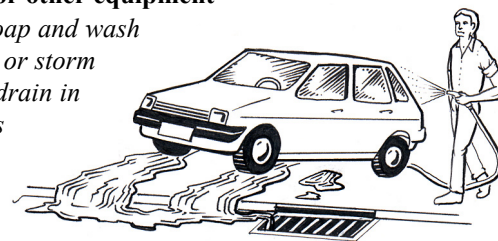
### Dispose of Trash and Other Wastes Properly

- ◆ **Never pour oil, grease, or food scraps down a storm drain.** Grease and oil discharged into storm drains can enter the creek and decrease the oxygen content of the water; coat fish gills, and smother bottom-dwelling organisms. Food scraps can cause excessive nutrient loading in the creek, which uses up oxygen needed by fish and other water critters. **Label storm drains so employees do not dispose of waste there.**

- ◆ **Cover and maintain dumpsters.** Close dumpster lids, place dumpsters under roof, or cover them with plastic sheeting at the end of each work day and during rainy weather. Inspect dumpsters regularly for leaks, and repair or replace any dumpster that is not water-tight. Return dumpsters to trash haulers for cleaning. Do not hose them down or clean them on site.

- ◆ **Keep pollutants off exposed surfaces.** Place trash cans around your business site to minimize litter. Dispose of wastes appropriately in covered dumpsters or recycling receptacles.

- ☠ **Do not wash cars, trucks or other equipment in a paved parking lot.** Soap and wash water can flow into a creek or storm drain. If possible, install a drain in a wash area that discharges water to the sanitary sewer or consider using a commercial car wash that recycles its water.



- ◆ **Remove old tires, garbage, and litter from your property.** Never store these materials within the flood zone where they could be washed away during a storm event.
- ◆ **Carefully monitor any chemical use in your business.** Develop a detailed spill prevention plan for every chemical use. Use containers that do not rust or leak for storage of chemicals. Store chemicals where they are protected from flooding.
- ◆ **Carefully remove trash, litter, and other dumped debris from the creek.** Amazingly, some people think of creeks as garbage dumps. Dumped debris can become a hazard during floods and can be harmful to wildlife. Support local organizations such as the Haw River Assembly during cleanup days. The Haw River Assembly holds an annual Stream cleanup day in March, and N.C. Big Sweep is held each September.
- ◆ **Reuse and recycle fluids and other products whenever possible.** Purchase reusable or recyclable materials whenever you can. If your business routinely uses chemicals or cleaning compounds, consider “closed loop” processes that recycle these materials.

## Protect Your Stream When Logging

 Use appropriate harvest methods to protect streams

### Before logging

- ◆ Obtain professional forestry assistance for a management plan. Talk to private consulting foresters or the State Forest Service about: determining effective harvest methods; forest regeneration options; and the numerous water quality rules that forestry activities must comply with.
- ◆ Walk the land and become familiar with the terrain and ground conditions. Soil surveys, topographic maps, and aerial photographs are also useful for identifying areas that need special protection during logging, such as steep slopes, streamside vegetation and wetlands.
- ◆ Time logging activities for dry periods. If not done properly, logging activities will disturb soil and contribute to erosion and runoff, therefore it's best to time these activities so that they do not occur during wet times. In the northern Piedmont of NC, fall is generally drier than the spring.
- ◆ Hire a logging company that has been certified by the N. C. Forestry Association "ProLogger" program. This program teaches water quality, safety, environmental issues, forestry management and business practices. See [www.ncforestry.org](http://www.ncforestry.org), "Logging & Transportation", for a list of ProLoggers.



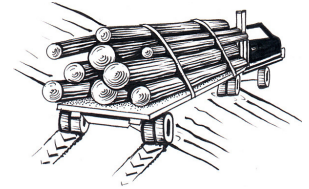
### When Planning and Constructing Logging Roads

- ◆ Actively participate in the planning of the logging roads. Runoff from poorly planned logging roads is one of the major causes of soil sedimentation in streams. Use Best Management Practices (BMPs)!
- ◆ Plan roads, skid trails (temporary pathways used to drag felled trees) and log landings (area for gathering logs before transport) as far away from streams and wetlands as possible. When a road must parallel a stream, leave a riparian strip of undisturbed vegetation of at least 60 feet wide between the road and the stream.
- ◆ On steep land, build roads to follow along the ground's contours, and not straight up and down the slope. Following contours will decrease road erosion due to stormwater runoff.
- ◆ Angle roadside ditches into vegetative areas rather than streams. Stormwater runoff collected in ditches carries debris and sediment from the logging site that will pollute streams and will increase stream flow, contributing to streambank erosion.

- ◆ Avoid stream crossings if at all possible. If stream crossings are unavoidable, approachways should be at a right angle to stream flow to minimize damage. Also, the streambanks and channel should be protected with natural or man-made material to make the soil surface stable to prevent accelerated erosion. Consider using portable, temporary bridgemat panels as a crossing platform, instead of culverts or log crossings. The N.C. Forest Service has bridgemats available for loggers to borrow. **Do not obstruct stream flow--it's the law!**

### During Logging Activities


- ◆ Clearly mark a riparian buffer of undisturbed vegetation of at least 100 feet on either side of continuous and wet weather streams. Do not allow loggers to damage this buffer with heavy logging equipment (skidder, feller-buncher, preloader, and bulldozer).
- ◆ Do not allow logging or use of logging roads when the ground or roads are wet. Logging during wet weather will drastically increase the likelihood of erosion.
- ☠ Do not allow equipment to be serviced where spilled fuel and oil can reach a stream. Allowing servicing waste to enter streams violates a water quality standard.
- ◆ Immediately remove any tree that falls into a waterway--it's the law! Debris from road building or logging can be used as a filter barrier alongside riparian buffers, but must be kept out of creeks where it could slow or stop stream flow.
- ◆ Request a site visit by your local N.C. Forest Service County Ranger Office to do a water quality inspection during logging activities. Upon inspection, the Forest Service will determine if the logging job is meeting the water quality rules requirements, and can provide advice to you and the logger on how to make improvements, if needed.



### Restoration after logging

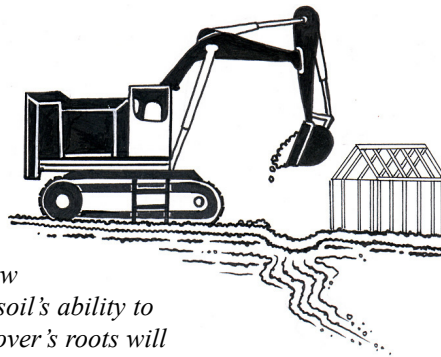
- ◆ Have the logger install BMPs that will control and/or capture runoff after the logging is done. Some BMP examples include water-breaks (called "waterbars"), turnouts, and sediment pits.
- ◆ Seed and mulch trails and all exposed soil once operations are complete. Regenerating vegetation will decrease loss of topsoil during rain events.
- ◆ Plant logged areas with forest trees native to North Carolina. Landowners can purchase seedlings at a low cost from the N.C. Forest Service.

## Protect Creek Flow at Construction Sites

 **Watch out for erosion! Sediment is the number one water pollution problem in North Carolina's Piedmont.**

### Control stormwater runoff during construction activities

- ◆ **Prior to construction the developer and/or owner should provide gravel driveways for access to the construction site to avoid sediment tracking onto streets. Any material reaching roadways should be cleaned up by the responsible parties at the end of each workday. Sediment that is deposited on roadways will be washed into nearby waterways during the next rain event.**
- ◆ **Land disturbance should be limited as much as possible to the construction area. Soil that has been cleared or disturbed should be covered with grain straw or similar material. Sloped areas should also be planted with a groundcover. Straw holds seeds in place and improves soil's ability to absorb rainwater; and the groundcover's roots will help hold the soil in place preventing erosion.**
- ◆ **Good housekeeping practices of appropriately storing and disposing of building materials should be used at construction sites. Keeping a site clean will reduce the amount of pollutants carried to creeks by the stormwater runoff.**
- ◆ **Schedule construction activities to limit the amount of time that soil is exposed and the amount of soil exposed at one time. Exposed soil can be quickly washed into local streams during storm events.**
- ◆ **Make sure construction sites near your home are using adequate erosion control techniques. They should be grading the site to keep sediment out of waterways and from moving off-site. Silt fences and sediment basins should be used to catch soil runoff. Call Division of Water Quality (see page 16) if you see excessive runoff or inadequate erosion control.**



## A Healthy Riparian Buffer is Vital for Healthy Streams

Riparian buffers are the lands adjacent to streams where vegetation plays a very strong role in protecting water quality. Vegetative buffers are also the most efficient and cost-effective way to protect our streams.

### Riparian buffers:

- ◆ slow down runoff during storms and thus protect streams from the scouring effect of bursts of stormwater roaring through;
- ◆ prevent sediment, nitrogen, pesticides, and other pollutants from reaching streams;
- ◆ allow trees to grow along the banks that provide shade to keep streams cool which is important to water critters; and
- ◆ provide habitat and a connected green corridor for many species of wildlife.

The beautiful native grasses, flowers, shrubs and trees that line the stream banks and thrive in the floodplains and bottomlands are an essential part of healthy streams. For a list of native riparian plants, obtain a copy of the *Native Plant Recommendations for Along Stream Banks in the Haw River Watershed* from the Haw River Assembly (see [www.hawriver.org](http://www.hawriver.org)).



## Using Conservation Easements to Protect Streams

A conservation easement enables a landowner to protect a stream into the future, by conserving and preserving the riparian land and its natural features.

A conservation easement is a written agreement between a landowner and a qualified conservation organization or public agency. The landowner promises to keep the land in its natural condition without extensive disturbance, and grants the agency the right to enforce the covenants of the easement and to monitor the property.

Because of the public benefit of preserving land in its natural undeveloped condition, there are significant federal and state tax incentives for the landowner who grants a permanent conservation easement.

North Carolina is fortunate to offer a range of wetland and riparian area conservation options, both governmental and privately operated. These programs employ a variety of conservation techniques such as easements, acquisition, and donations to provide wetland and riparian area protection on private property. See *Resources for Land Conservation of Wetlands and Streams* on page 17 for a list of qualified conservation organizations and public agencies.

## Resources for Water Quality Questions and Concerns

**Haw River Assembly 919-542-5790, [www.hawriver.org](http://www.hawriver.org), email: [info@hawriver.org](mailto:info@hawriver.org)**

**Haw River Watch Project** [riverwatch@hawriver.org](mailto:riverwatch@hawriver.org)

### State Government Information Resources

*Department of Environment and Natural Resources (DENR), [www.state.nc.us/enhr](http://www.state.nc.us/enhr)*

DENR Customer Service Center (M-F, 8 am - 5 pm) 1-877-623-6748

**Water Quality Questions and Water Pollution Problems**, including reporting fish kills, poor stream conditions, turbidity, point and non-point source pollution, oil and chemical spills and other emergencies:

*Division of Water Quality (DWQ) <http://h2o.enr.state.nc.us/>*

Raleigh regional office (M-F, 8 am - 5 pm) 919-791-4200

Winston Salem regional office (M-F, 8 am - 5 pm) 336-771-5000

DWQ Emergency Hotline 24 hour 1-800-858-0368

### Oil and Chemical Spills and other Emergencies *DENR, DWQ*

During business hours (M-F, 8a-5p): Call appropriate DWQ regional office above.

After hours: Highway Patrol 919-733-3861

DWQ Emergency Hotline 24 hour 1-800-858-0368

### Sediment Runoff/Erosion Control *N.C. Division of Land Resources,*

*Land Quality Section [www.dlr.enr.state.nc.us/pages/landqualitysection.html](http://www.dlr.enr.state.nc.us/pages/landqualitysection.html)*

Raleigh regional office 919-733-4574

Winston Salem regional office 336-771-5000

DWQ Emergency Hotline 1-866-STOPMUD (866-786-7683)

### *Local Contacts, Sediment Runoff/Erosion Reporting and Prevention*

Orange Co. 919-245-2586 Town of Chapel Hill 919-968-2833

Chatham Co. 919-542-8208 Durham Co./Durham 919-560-0739

City of Burlington 336-222-5050 Town of Cary 919-469-4347

Guilford County 336-641-3803 City of Greensboro 336-373-2158

City of Reidsville 336-349-1065

### *Agricultural Sediment Runoff*

N.C. Division of Soil and Water 919-733-2302 [www.enr.state.nc.us/dswc/](http://www.enr.state.nc.us/dswc/)

### *Local Contacts, Agricultural Sediment Runoff Prevention*

Alamance 336-226-0477, ext. 3 Chatham 919-542-2244, ext. 100

Durham 919-560-0558 Forsyth 336-767-0720

Guilford 336-375-5401, ext. 101 Orange 919-644-1079, ext. 3

Rockingham 336-342-0460, ext. 101

### Forest Management Questions

*DENR, N.C. Forest Service [www.dfr.state.nc.us](http://www.dfr.state.nc.us)*

Headquarters (Raleigh) 919-733-2162

Regional Office (Jordan Lake) 919-542-1515

Forest Tree Seedling Coordinator 1-888-NCTREES (888-628-7337)

### *N.C. Forest Service County Ranger Offices*

Alamance 336-376-3596 Chatham 919-542-5739

Durham 919-560-0562 Guilford 336-375-3631

Orange 919-732-8152 Wake 919-212-7363

*North Carolina Forestry Association, [www.ncforestry.org](http://www.ncforestry.org)*

## On-Site Wastewater Issues; Issues with Wells

State 1-800-9-SEWAGE (1-800-973-9243)

N.C. Aquifer Protection (DWQ) 919-733-7015 <http://h2o.enr.state.nc.us/aps/gpu.htm>

Alamance 336-226-0477, ext. 3 Chatham 919-542-2244, ext. 3

Durham 919-560-0558 Forsyth 336-767-0720

Guilford 336-375-5401, ext. 3 Orange 919-644-1079, ext. 3

Rockingham 336-342-0460

## Resources for Land Conservation of Wetlands and Streams

### Statewide Land Trust

Conservation Trust for North Carolina (CTNC) 919-828-4199

CTNC website <http://www.ctnc.org/home.asp>

### Local Land Trusts

Piedmont Land Conservancy 336-691-0088

Triangle Greenways Council 919-715-4191

Triangle Land Conservancy 919-833-3662

### NC Soil and Water Conservation District Offices

Alamance 336-228-1753, ext. 3 Chatham 919-542-8240

Durham 919-560-0558 Guilford 336-375-5401

Orange 919-245-2750 Wake 919-250-1050

### NC Farm Service Agency County Offices State: 919-875-4800

Alamance 336-228-1753 Chatham 919-542-2244, ext. 2

Guilford 336-375-5401, ext. 2 Orange-Durham 919-732-4301

Wake 919-231-6126

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