



Raritan
Headwaters
Association

1959-2019
PROTECTING THE
WATERSHED FOR
60 YEARS

BE THE RIVER

Move. Just Move.

Don't let the world look past you.

Be the snowdrop on the snow.

Be the weed sprouting from the stone.

Be the voice.

Be the music.

Be the coral snake, the echo, the tether, the story.

Be the wishbone, the open book.

Be the breath.

Be the life.

Be the earthquake, the feather, the knife.

Be the stubborn spot.

Be the best idea you've ever had.

Be the curious child.

Be the cyclone.

Be the River.

Don't wait for your turn.

Be the curtain rising. Stand up.

Yell and be heard.

Today, be amazing.

And then,

Be the Ocean.

—*THIS BOOK WAS A TREE*,
MARCIE CHAMBERS CUFF



The presence of brook trout in our headwater streams is an indicator of a healthy watershed. This beautiful native fish only thrives in pristine, clear, cold water.

Long before the first Earth Day or Clean Water Act, two New Jersey women recognized the urgent need to protect lands around the Raritan River from burgeoning real estate development.



Thanks to their visionary action, the Upper Raritan Watershed Association (URWA) and the South Branch Watershed Association (SBWA) were formed in 1959—both dedicated to protecting our communities from pollution and poor land use decisions. In 2011, the two organizations merged to effectively strengthen their impact, forming the Raritan Headwaters Association (RHA).

Sixty years later, RHA remains steadfast in its mission to protect and improve water quality and other natural resources of the headwaters region of the Raritan River Basin—work that affects the health, safety and quality of life for those who live in the watershed and in the downstream communities that rely on the water we protect.



The Upper Raritan River Watershed is the headwaters region of the Raritan Basin. It includes the North and South branches of the Raritan River and their numerous tributaries.

The region contains two of the state's largest water supply reservoirs, Round Valley and Spruce Run.

The 470-square-mile watershed provides drinking water to 300,000 residents of 38 municipalities within Hunterdon, Somerset and Morris counties, and some 1.5 million homes and businesses down river that depend on clean water coming from the Raritan headwaters.



Raritan Basin



In periods of heavy rainfall, the North Branch overflows its banks. While real estate development has exacerbated the problem, flooding is not new to the river. “Raritan” comes from an Algonquian word meaning “stream overflows.”

The Raritan River Basin is the largest river basin located entirely within the state of New Jersey and is the watershed for the Raritan River and its many tributaries.

It encompasses 1,100 square miles of land, about the size of Rhode Island, and ultimately drains to the Raritan Bay.

The basin was formed by the terminal moraine of the Wisconsin glacier in New Jersey (now Budd Lake, the Great Swamp and Arthur Kill) and the southern extent of Pleistocene glacial deposits.

The first known humans to inhabit the Raritan River Basin were the Unami of the peaceful Lenni-Lenape tribe, and part of the larger Algonquin nation that spanned northeastern North America. They were also called the “turtle tribe” of, what was known to European settlers as, the Delaware Indians.

Fairview Farm

The recorded history of the land in Bedminster that is currently headquarters for the Raritan Headwaters Association goes back to 1701 when it was included in the large Peapack Patent.



For much of the 19th century the land was farmed by various members of the Vliet family.

In 1915, Paul Zuhlke purchased the entire tract. Zuhlke immigrated to the United States from Germany in 1893 and soon established his own New York import-export firm dealing in paper. Zuhlke named the property, which he owned for 58 years, “Fairview Farm” after his Madison NJ estate.

The property initially served as the Zuhlke’s weekend retreat so he could board and ride his thoroughbreds. In 1927, Paul Zuhlke married Roberta Lowrey and the couple turned Fairview Farm into their permanent home and

soon began to raise Guernsey cows as well as pigs.

In 1928, Zuhlke worked with the Agricultural Extension Service to develop a demonstration forest by planting rows of Norway spruce and red pine trees. Some of these trees still line the drive into Fairview Farm. At Paul’s death in 1958, his estate was left in trust for Roberta.

Roberta Zuhlke died in 1972, leaving the farm to the Upper Raritan Watershed Association. In her will, Roberta stated her “desire and intention that Fairview Farm shall be dedicated to the use of a permanent refuge for the preservation of wildlife.”



In 1979 Charlie and Jeanie Chapin launched the Old Fashioned Country Fair that still takes place every October at Fairview Farm, harkening back to the days of country life on the dairy farm.

Two Origins, One Destination

In the late 1950's, forward-thinking people in the region were concerned that the pace of real estate development was accelerating and that natural resources in central NJ were being destroyed.

Unless action was taken, these resources would be irrevocably lost. In Somerset county, a small group began meeting in living rooms to discuss the future of their communities. In Hunterdon county, an environmental educator turned her focus to preserving the river she loved.

Prophetically, these citizen-activists saw watersheds, rather than the artificial lines of political jurisdictions, as the framework for action. They understood that the preservation of natural resources would depend on attention to the physical, economic, social and biological activity within (and beyond) watershed boundaries.

In 1959, two groups in the Raritan River's headwaters region incorporated as independent, non-profit, voluntary organizations: the South Branch Watershed Association and Upper Raritan Watershed Association. Each group benefited from visionary leadership especially that of two women who are each remembered as forces to be reckoned with.



Hermia Lechner and her husband, Robert, bought a 74-acre property in Clinton Township along the South Branch they called Echo Hill. They ran a summer nature camp there for children from 1936 to 1959. She knew that educating the public was the key to protecting natural resources.

Hermia championed the concept of greenways to preserve open space, water resources, wildlife and outdoor recreation. She founded the South Branch Watershed Association "to raise public awareness to the fact that a river is a treasure... not to be taken for granted." Hermia spurred the formation of the Hunterdon County Park Commission and was NJDEP Green Acres Program Administrator from 1982-1987.



Helen Woodman, a tireless environmental advocate from Somerset County, was a pivotal founder of the Upper Raritan Watershed Association. In the late 1950's, Helen learned that a developer, who owned 23 acres along the river just above the Far Hills fairgrounds, wanted to develop the land and she soon became a catalyst for flood plain protection. She went to town council

meetings and advocated to stop this irresponsible development. Responding to Helen's message, Mr. and Mrs. Carl Shirley of Bedminster eventually purchased the land and deeded it to the Upper Raritan Watershed Association.

In 1963, Richard D. Goodenough, then a recent graduate of the University of Maine, was hired as URWA's first executive director. He immediately embarked on the Association's first great advocacy campaign when the Port Authority of New York and New Jersey proposed the location of a third jetport for the New York metropolitan region in Readington Township.



Dick, on behalf of URWA, was presented the "National Conservation Organization of the Year" award by First Lady Ladybird Johnson in 1965 for outstanding contributions to the wise use and management of the nation's natural resources.



In 1995, Marie Kneser Newell became executive director of the South Branch Watershed Association. She grew up on a Hunterdon County farm, studied geology's connection to water quality as a student in Rutgers' Environmental Management program, and had served as a SBWA trustee since 1989.

Under her leadership, SBWA established the annual, ongoing biological stream monitoring and stream cleanup programs. The stream monitoring program received the prestigious Environmental Quality Award from the EPA in 2007.

"I had the privilege of being one of Hermia's protégés," says Marie. "Hermia's great vision, drive and confidence in her work with diverse stakeholders set a standard for female entrepreneur leadership in the non-profit world. Hermia's leadership style and commitment to water resource protection continues to inspire my work today."

“Most of us know all too little about the water conditions, soil, forestry, and other resource problems right here in our own community. And yet, our living, our comfort, and the beauty of this unique watershed depend largely on how well we look after our natural resources.”

—UPPER RARITAN WATERSHED ASSOCIATION NEWSLETTER, 1961



Hermia Lechner opened the first SBWA office on the 2nd floor of a building on Center Street in Clinton, walking distance from this iconic NJ scene on the South Branch of the Raritan River.



In the late 1960's conservationist Candace Ashmun took a position as a water quality scientist at URWA. She was a catalyst for using scientific data to win environmental battles and for making the connection between land use and water quality. Among her many contributions was URWA's

first Natural Resource Inventory in 1968—the first in New Jersey. This pioneering work formed the basis for many of the planning and zoning decisions made over subsequent years throughout the watershed.



80% of homes in the watershed rely on well water, yet many homeowners do not know where their water comes from or what is in it.

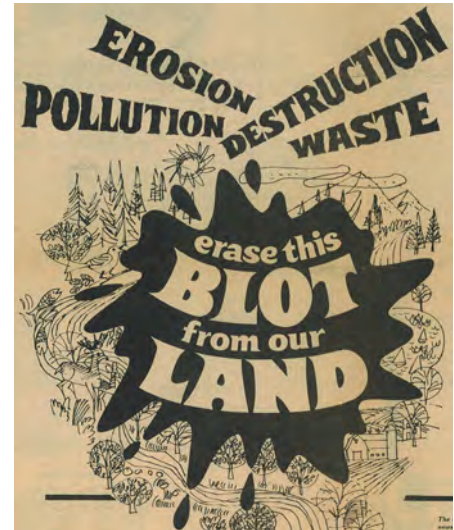


In 1974, Hermia Lechner created the well testing program at SBWA. Experts recommend that private well owners test their drinking water annually for bacteria, nitrates and any other contaminants that are known to be of local concern.

What is more, Hermia realized this was a powerful way to engage citizens as environmental advocates. The professional staff at RHA continues to analyze and provide well water quality reports—over 6,000 last year.



In 1970 the U.S. National Park Service designated Moggy Hollow, an URWA preserved property located in Somerset county, a National Natural Landmark.



The modern environmental movement had gained momentum by this time, resulting in the establishment of state and federal environmental regulatory agencies—from local environmental commissions to the EPA, and landmark legislation like the Clean Water Act in 1972.

URWA and SBWA fulfilled the promises of the times by actively participating in new conservation planning opportunities created by federal law, advocating for more and better land use planning at the local level.



The Lenape called the confluence of the north and south branches *Tucca-Ramma-Hacking*, meaning the flowing together of water.

In 1980, URWA identified surface and ground water pollution at a hazardous landfill located in Washington and Chester Townships. The Combe Fill Landfill contained 60 different chemicals, eight heavy metals and radioactivity. Under URWA's leadership, the municipalities and a group of citizens successfully closed the site and got it listed as an EPA Superfund site in 1983. Today, the 65-acre landfill is capped and a treatment plant monitors and remediates contaminated ground water.

In the 1990s, SBWA created a river monitoring program to collect biological data and established an annual watershed-wide volunteer Stream Cleanup event. In the North Branch region, URWA established a land preservation program and accepted the organization's first conservation easement in Bedminster from the Graff family.

Just as the Raritan River is formed by the confluence of two branches, the RHA was formed in 2011 by the merger of SBWA and URWA. The combined organization has increased effectiveness and impact on the health of the whole Raritan Basin headwaters region.



Our mission is to protect
clean water in our rivers,
our streams and our homes.



Raritan Headwaters Association at 60

Today we deliver our mission through science, education, advocacy, land preservation and stewardship.



“Thank you Raritan Headwaters for your commitment to protecting the natural resources we all depend on. Every year science teaches us about the importance of your mission—past, present and future. Continue your good work!”

—THE HONORABLE THOMAS H. KEAN



Land Preservation

Preserving land is fundamental to protecting water quality. Forests, meadows and wetlands filter toxins from our surface water and groundwater supplies. Trees shade headwater streams, keeping them cool enough for sensitive species to survive. Preserved open spaces safeguard wildlife habitats, help purify the air and maintain the rural character of our communities.



The Raritan Headwaters Association was accredited by the national Land Trust Accreditation Commission in 2018, recognizing our professional excellence in preserving and stewarding lands that protect our region's rivers, streams and underground water resources.

RHA owns and manages 11 publicly accessible, environmentally sensitive land preserves and holds another 33 conservation easements within the watershed. In partnership with others, the Association has actively preserved over 7,000 acres of critical open space in the watershed region and seeks to add thousands more.



Dorothy Eweson, URWA trustee for over three decades, established an 88-acre conservation easement on her property in the headwaters of the Middle Brook.

Land Preserves

- Fairview Farm Wildlife Preserve
- Burnt Mills Flood Plain
- Coccoziello Natural Area
- Dinner Pot Preserve
- Fox Hill Preserve
- Helen Woodman Natural Area
- Hollow Brook Preserve
- Mill House Natural Area
- Moggy Hollow Natural Area
- William Post Natural Area
- Roxiticus Preserve



Raritan Headwaters Association "preserves" are owned and managed for passive recreation and the protection of wildlife. RHA "conservation easements" permanently limit uses of the land, but public access is not required.

Fairview Farm Wildlife Preserve



The early 1800's barn, constructed with hand hewn native oak beams, was restored in 2001 with philanthropic support from the community.

Fairview Farm includes a bird and butterfly garden, a pond, and 5 miles of trails that allow visitors to hike through meadows and forests or simply relax in a green space.

Betty Merck, URWA trustee for three decades, was dedicated to preserving open spaces and the area's rural character. Her family honored her memory with a gift to RHA for the improvement and maintenance of Fairview Farm.





Lab House. The old milk house has been converted to a temperature controlled, fully equipped science laboratory with microscopes and other water testing equipment.



Raritan Room. A big, bright and open indoor/outdoor space used for school field trips, summer camps, and citizen scientist and teacher trainings.



Betty Merck Science and Education Center. Houses staff, community meeting rooms and children's exploration room.

Stewardship



Not only does RHA preserve land, we restore and improve natural habitats.

Stewardship projects include removing invasive species while planting native trees and shrubs to restore stream banks, wetlands, meadows and forests.

We establish pollinator habitats, install nest boxes, and encourage residents to stay mindful of protecting wildlife from harmful pesticides and herbicides.

Annual Stream Cleanup

In celebration of Earth Day each year, RHA mobilizes volunteers—families, scouts, schools, corporate groups, churches, civic clubs, environmental commissions and others—to collect trash from the region's streams.



CLEANUP 2019: During three hours on April 13, 1,700 volunteers removed 18 tons of litter—including 3,040 plastic bags and 9,133 plastic bottles—from 46 sites along 80 miles of stream.



“ It is not by chance that each spring in the Greenheart Country the earth opens up. The soil turns green. Bluebirds return to their man-made houses. Monarch butterflies arrive anew from wintering in Mexico. No, not by chance does the clunk-clunk of operating farm machinery sound out across the valleys.

The perennial softness of the air carries the scent of manure, thawed, going about its work. Horses, turned out without benefit of blankets, neigh and prance in the pastures. As the sun slides north to dissolve April’s chill, hardware stores are thronged. Nurserymen and garden centers fill their order books and work into the dusk. The rains come, hesitantly at first. The early woodland flowers thrust through the decaying canopy of leaves.”

—EXCERPT FROM “THE GREENHEART COUNTRY”
BY ROBERT D. GRAFF, URWA PAST PRESIDENT AND TRUSTEE



Planting trees and other vegetation is one of the most effective ways to reduce flooding and storm water runoff, which causes erosion and pollution in our waterways.

Science

Citizens, conservation partners and policymakers count on us to provide timely, objective scientific advice. RHA's science team works to understand essential ecosystem functions.

The more we know about why changes may be occurring in the watershed and what to expect in the future, the better the decisions we can make about stewardship and use of these resources.

RHA's ecosystem-based research spans every part of the 470-square mile watershed. We actively monitor ecological, biological and chemical factors, collect the data and produce studies to inform the public.

Our science team utilizes an integrated, interdisciplinary approach to understanding the watershed. Together, our team is building the knowledge needed to successfully influence the short and long-term health of our water supplies.

Stream Monitoring Program

For more than 25 years Raritan Headwaters has collected data on the health of our streams. Each June, using the highest NJDEP standards, our staff and citizen scientists collect benthic macroinvertebrates—organisms that live at the bottom of streams. The larvae of mayflies, stoneflies and case-building caddisflies are especially sensitive to pollutants, so discovering them in a stream is an indication of good water quality.



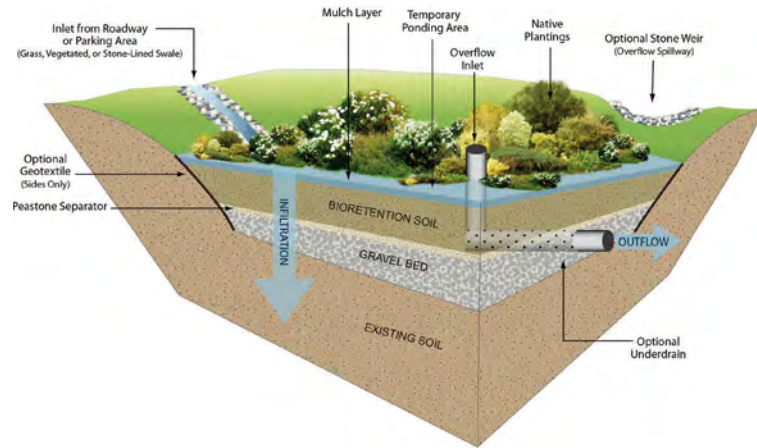
By analyzing trends over time, we can better understand the causes for decline in water quality, such as land use changes and impairments related to chemicals, fertilizers and other pollutants finding their way into our water. The data we collect helps identify strategies for positive change.

In 2018, RHA published a report on a study of microplastics based on samples taken from ten sites along the South Branch. Every sample contained microplastics coming from personal care and cleaning products, synthetic fibers, and degraded water bottles and plastic bags. These nearly invisible particles have become a contaminant of concern for marine wildlife and human health.

Advocacy

Ever since Helen Woodman stood up at town council meetings and Hermia Lechner formed environmental commissions, RHA has been rooted in advocacy.

New Jersey needs a go-to expert on the protection of freshwater. Raritan Headwaters is providing that vital resource in Trenton and at home. Throughout the watershed region's 38 municipalities, RHA educates planning boards, environmental commissions, boards of health and township committees so that policymakers can make informed decisions on issues that have environmental impact. Our professional staff provides workshops for decision-makers, with topics like "Climate Resilient Municipalities: Controlling Stormwater, Protecting Streams and Maintaining Water Quality."



Bill Kibler, Director of Policy, testifies at a Senate hearing in Trenton



Stormwater is a major source of non-point source pollution in our watershed.

RHA advocated for a statewide stormwater utilities bill and is working with communities to implement the legislation that will help with the management of storm-related flooding and polluted runoff.

Education

Environmental education is at the core of Raritan Headwaters' mission.

For more than five decades, our education programs have helped thousands of New Jersey children and adults learn about the watershed and how to take effective actions to protect the water and natural resources on which we all depend.



WaterWays

Our trained educators provide experiences that foster appreciation for the natural world and create a greater sense of stewardship for the environment. Students learn first-hand about the sources of their drinking water, how their own behavior affects the quality of their water, and what they can do to help protect natural resources in their own communities. Classroom time is followed by field sessions at local streams where children get in the water to discover the macroinvertebrates, salamanders and fish that indicate water quality.

Mobile Classroom

In 2018, the “2121 Club”—a group of super supporters named for Fairview Farm’s address on Larger Cross Road—funded a fully equipped classroom in a van. The customized van has allowed RHA to take programs to children and communities that have historically been beyond our reach.



Nature Camps

Each summer, Fairview Farm welcomes children to our 170-acre outdoor classroom to explore forests, meadows, streams and a pond. RHA’s experienced environmental educators offer everything from nature camp for 3-year-old Honeybees, to gardening and photography camps for 13-year-olds.

RiverFest

Launched in 2016, RiverFest is one of our travelling watershed education programs in which hundreds of students participate in a science fair-style program at their school any time of year. Teachers, parents and community volunteers are also trained to help deliver interactive mini-lessons on water quality, water conservation and wildlife.



All Raritan Headwaters Association education programs correspond to New Jersey’s Core Curriculum Standards and Next Generation Science Standards.

Education



Farm Camp

In 2009, Joannah and Harry Wilmerding started a camp at their Pleasant Valley Mills Farm in Mendham Township along the North Branch of the Raritan River. Campers get hands-on experience in the daily routines of a working farm. They feed the chickens, groom the ponies, harvest vegetables from the organic garden, and experience lessons in everything from weaving and dyeing to sheep shearing and beekeeping.





River-Friendly Certification

RHA partners with the New Jersey Water Supply and the Watershed Institute to promote clean water and a healthy environment through voluntary action by individuals and institutions. To achieve these goals we work one-on-one with residents, businesses, golf courses and schools to improve land stewardship practices. The program works to reduce pollution, conserve water, restore habitat for wildlife and educate the public about becoming better environmental stewards.



Birdwatching

Monday mornings have become special on Fairview Farm. To the delight of birders, naturalist Alan Rennie leads a guided hike year-round. His checklist is building as the farm's diverse habitats attract numbers of expected and sometimes unexpected visitors.

Known for our "singing fields," each March we hold a "Woodcock Watch" on Fairview Farm to experience the whimsical courtship display of this curious little gamebird.



Fairview Farm Wildlife Preserve is a hotspot on eBird.org, the world's largest biodiversity-related citizen science project managed by the Cornell Lab of Ornithology.

Volunteers

They monitor streams, pick up litter, plant trees, set up the Country Fair, maintain trails, promote well testing, remove invasive plants, monitor bird nesting boxes and much, much more.



They're RHA volunteers! While we have professional staff managing key programs, we depend on the time and talents of volunteers to help us deliver our mission.

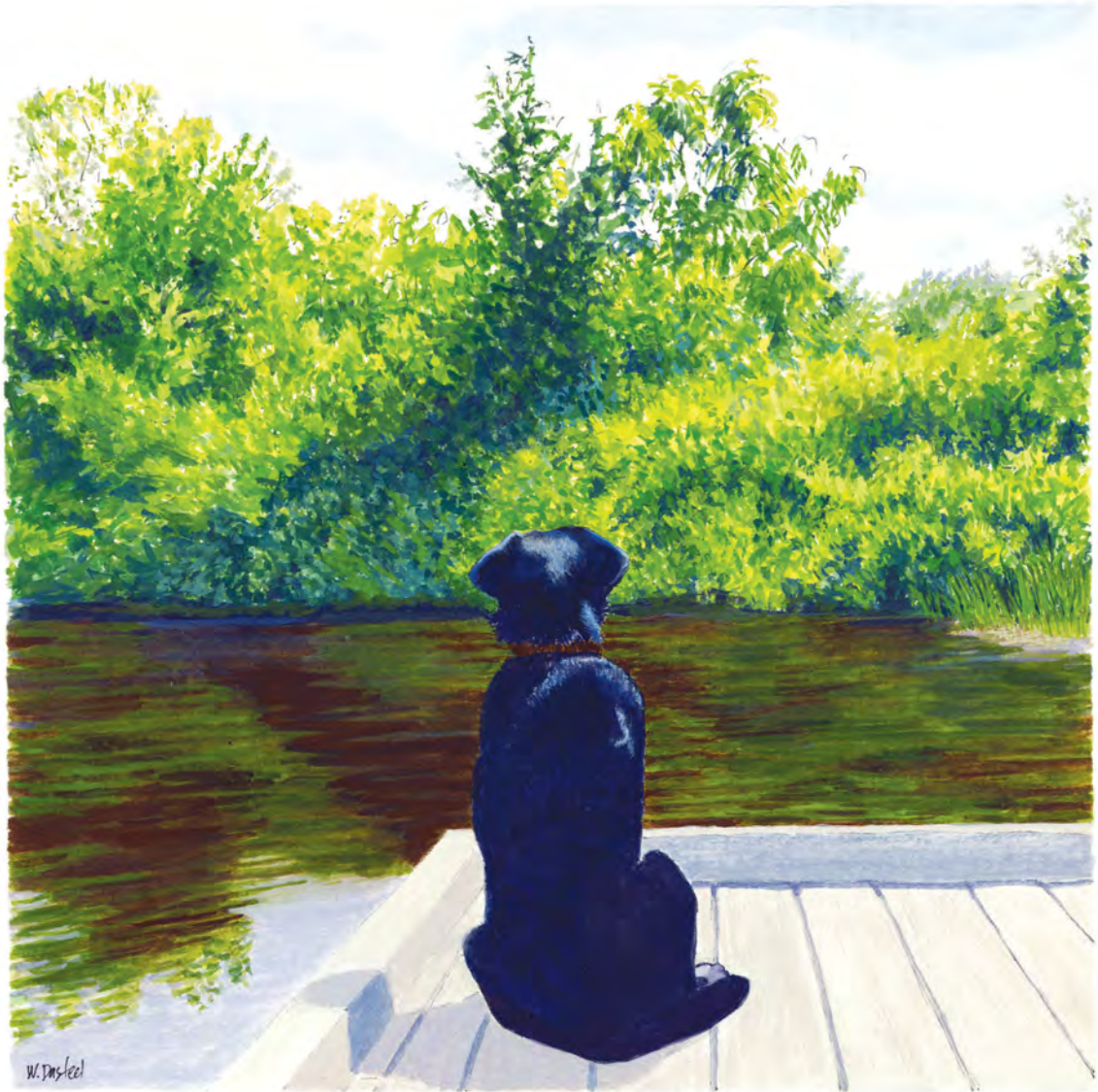
Citizen Scientists

2018 Volunteer of the Year Ray Croot grew up in Chester in the days when it was a rural farm community. He remembers playing outdoors in the summer and cooling off in a small pond—the swimming hole was where a shopping center is today. Now Ray is a dedicated citizen scientist and leader in RHA's Stream Monitoring Program.

Volunteer Groups

Corporate teams, scouts, and community service groups make a difference in the health of the watershed. They work on restoration and clean up projects, trail and garden maintenance, event support—contributing thousands of volunteer hours. On average, 2,500 volunteers pitch in to support our conservation programs each year.





Looking Ahead

It's hard to imagine what this beautiful region we call home would look like today had the Raritan Headwaters Association not been vigilant these last 60 years. With your help, we have been dedicated to keeping our watershed healthy and our communities wonderful places to live, work and play.



We don't know all that the future holds, but we do know that healthy watersheds provide far-reaching benefits that are essential to our social, environmental and economic well-being. And the world is facing a critical shortage of clean drinking water along with the threat of a changing climate.

Imagine now what we can do to make a real and lasting impact on the health of our region—and beyond.

Raritan Headwaters Association aims to build its capacity by engaging more community members, elected officials, businesses and conservation partners, because change

begins here. We'll educate more children, the future caretakers of our planet, and adults who carry information back to their communities and ultimately the ballot box. Securing the future begins with recognizing that it is people who determine the health of the environment.

Together, let's continue to preserve, monitor, clean up, replant, advocate and learn more so we can safeguard the health of the Upper Raritan Watershed. Together, let's protect the lands and water we all depend on.

2018-2020 Strategic Objectives

- Make water quality a top community priority.
- Communicate the connection between land use and clean water.
- Use the best available science to inform and guide policy decisions.
- Preserve and steward lands that protect critical water sources.
- Provide solutions and tools to address environmental threats.
- Encourage children and families to get outdoors.
- Foster a conservation ethic that values the interconnectedness between humanity and the natural world.

“When one tugs at a single thing in nature,
[s]he finds it attached to the rest of the world.”

—JOHN MUIR.



Acknowledgements



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Raritan Headwaters Association Leadership

Our vision is that everyone within our reach has access to clean, safe water that is swimmable, fishable and, above all, drinkable.

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