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Your Ecological Address -- South Orange

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SOUTH ORANGE GREEN TEAM
& ENVIRONMENTAL COMMISSION

You know your street address, but do you know your ecological address? That's the larger community of life that includes animals, plants, birds, insects, and fish along with the soil, water, and climate that interact to make South Orange a very special place.

From the breakup of the Pangea Supercontinent to the creation of mountains by molten magma and the deep freeze of glaciers hundreds of feet thick, South Orange has been sculpted dramatically for millions of years. The result is a rich environment that has supported a tremendous flourishing of life.

It's been a great place to live since people began enjoying the area about 9,000 years ago, when forerunners of the Turtle "Hackensack" Band of the Lenni-Lenapi Nation settled here. They managed to keep the ecosystem intact for those thousands of years, but in just the past 120 years, human activities have caused a severe decline in the diversity of life, and in the quality of the air and water.

But South Orange citizens have begun to restore their unique local environment.

This booklet is a basic introduction to our shared ecological community and what you can do to help everyone enjoy health and a good quality of life.

You live in the watershed of the East Branch of the Rahway River, which is within the core area of the greater Hudson/Raritan Estuary. An estuary is the place where a river's current meets the sea's tide, and they are among the most productive ecosystems on Earth.

Our location along the first Watchung Mountain near the Atlantic Coast makes the South Orange area a unique place for wildlife and a globally recognized stopover for migratory birds. You will be amazed by the diversity of species within this mixed oak region of the Eastern deciduous forest.

Map courtesy of The Rahway River Watershed Association, whose purpose is to protect and restore the Rahway River and its ecosystem. To learn more about our organization visit our website at rahwayriver.org, or like our facebook page to keep apprised of local environmental news.

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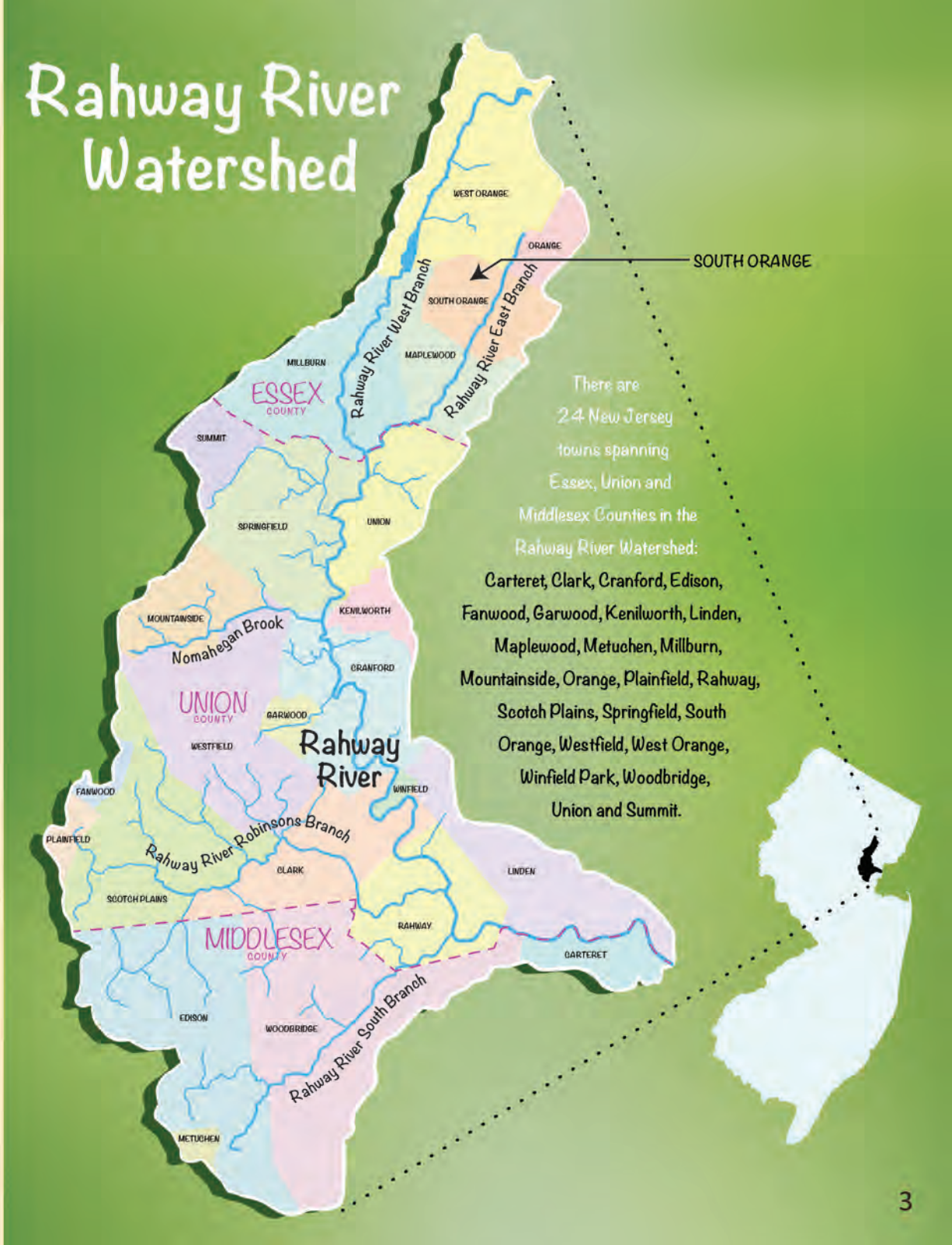
Rahway River Watershed



The East Branch of the Rahway River strings together the remaining fragments of open space in South Orange.

This necklace of green provides habitat for the greatest diversity of species left in town.

As rain falls on impermeable surfaces, such as driveways and parking lots, it washes pollutants into storm drains which flow into the River. The storm drains you see on the streets in South Orange are not attached to sanitary sewers or treatment plants. Storm drains send water through pipes that flow directly into the River, untreated. They are, in reality, tributaries of the River.

The Rahway also provides drinking water for thousands of people downstream.

They are all under threat from polluted rainwater runoff carrying fertilizers, pesticides, herbicides, plastics, oils, and pet waste from yards and streets.

Sanitary sewage (from sinks, toilets, washers, etc.) travels through a completely separate system to a treatment plant that discharges effluent into the Arthur Kill, which then flows into the Estuary and on to the Atlantic Ocean. The Rahway River takes a similar route to the Ocean, though it winds for 24 miles.

South Orange citizens can protect the River and the people and wildlife that depend upon it by taking some simple steps:

✓ Reduce your consumption of single use plastics, and remove plastic litter wherever you see it around town. Plastics do not biodegrade and they are destroying ocean wildlife at a staggering rate.

✓ Don't use herbicides, insecticides, or fertilizers containing phosphorus on your yard. Alternatives are readily available.

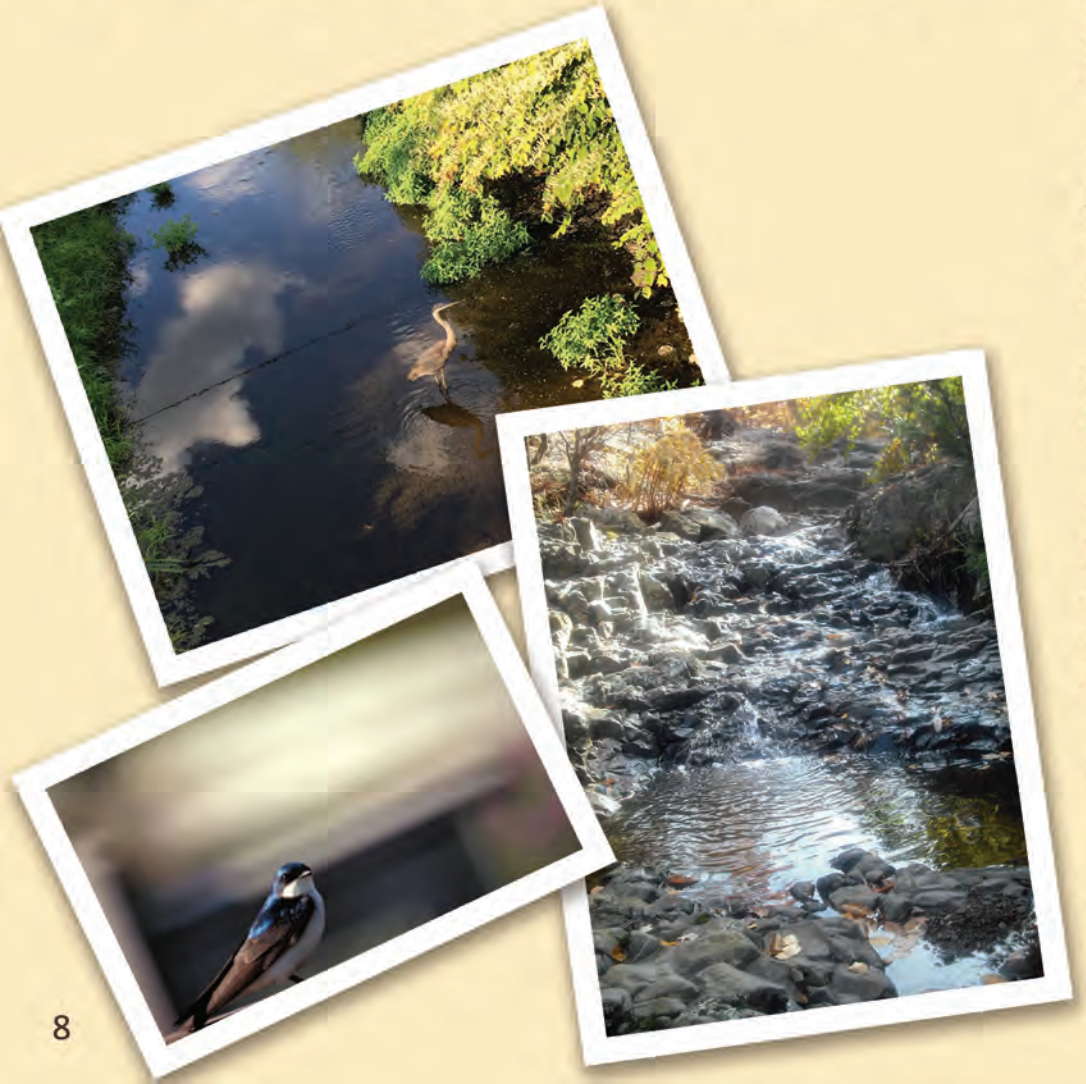
✓ Don't let any trash or pet waste escape onto the streets, parking lots, or sidewalks. Any trash on these surfaces will be flushed into the River when it rains.

✓ Reduce the amount of run-off from your property by using porous surface covers like moss, stones, or grass on driveways and patios, planting rain gardens, redirecting gutter downspouts and sump pumps, and installing rain barrels.

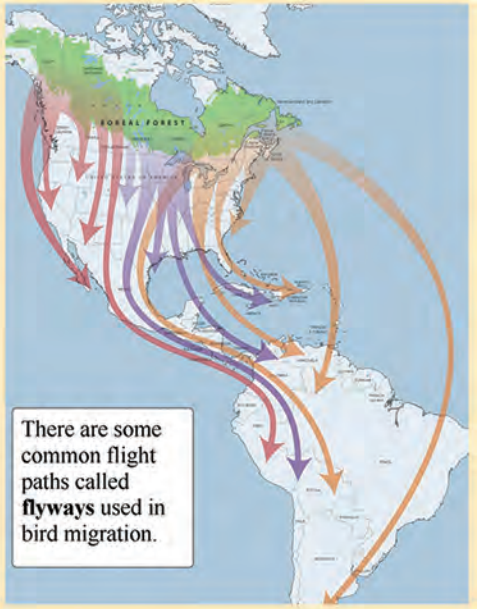
✓ Participate in River Day during the first weekend of May to celebrate the natural beauty of South Orange and help to remove trash from the River habitat.

The Village of South Orange sits at the base of the First Watchung Mountain (derived from the Lenape term Wach Unks, or 'high hills'). 200 million years ago, hot magma erupted through the surface and built the Watchung Mountains, which are known for their isolated ecosystems containing many rare plants and endangered wildlife.

The South Mountain Reservation is a 2,110 acre protected area that adjoins South Orange and acts as a crucial stopover site for dozens of species of neo-tropical migratory songbirds such as the scarlet tanager and indigo bunting.



Stopover sites are habitats that consistently provide migrants with the opportunity to refuel, rest, and reorient during their arduous journey. Each site is critical to the continued survival of migrant species.



The Atlantic Migratory Flyway runs north to south through New Jersey, and the State's latitude puts it about midway between the equator and Arctic forests.

If we conceive of migration as a transit system, New Jersey is the hub where major flight lanes along the coast, the river valleys and the mountains converge and radiate out to destinations north and south.

New Jersey is at the crossroads of migration, and South Orange is a center of that crossroad.

Although the Reservation proper is not within the boundaries of South Orange Village proper, its adjoining proximity means that migratory birds and other endangered wildlife may visit your backyard. You can take measures to protect them when they do visit.

✓ Add a bird feeder, a water source, and birdhouses to your yard.

✓ Keep free roaming cats indoors, especially during the months of migration: April through May, and September through October. In the U.S. alone, cats kill billions of birds every year.

The original ecosystem of South Orange has been mostly fragmented into housing lots, which means that the habitat for migratory birds, butterflies, endangered plants and other species exists mainly as yard space around homes. The good news is that some areas in town have soil so rich that it's classified as prime farmland of statewide importance.

In just one example of our heritage of plant diversity, New Jersey possesses nearly 20 times the number of indigenous taxa of orchids than does the State of Hawaii.

But this floristic diversity, representing the culmination of millions of years of evolution, geological processes, and complex biological interactions, is increasingly imperiled by invasive nonindigenous plants that aggressively invade natural plant communities. Invasive species then start to displace indigenous species, altering the community structure and contributing to species extinctions, which disrupts the overall functioning of ecosystem processes.

Here are some actions you can take to begin restoring the ecosystem community of South Orange right in your backyard:

✓Learn to identify and remove alien invaders such as Japanese barberry, burning bush, Japanese Knotweed, Asian honeysuckle vines, and English Ivy.
http://www.nj.gov/dep/njisc/Factsheets/index.htm

✓Plant native species that support local birds and butterflies such as viburnums, hollies, dogwoods, milkweed and asters. Avoid butterfly bush, which doesn't feed a single caterpillar, guaranteeing a dearth of future butterflies.
http://www.npsnj.org

✓Don't use ANY herbicides and pesticides. Fertilize as little as possible, only with natural products that are slow releasing and do NOT contain unnatural amounts of phosphorous and nitrogen.

✓Consider replacing areas of lawn, which are "green deserts," with a variety of native species.

✓With a few smart changes, you can transform your yard into a certified Backyard Habitat: http://ow.ly/Zjn8C