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NEW THREAT TO ROCKLAND'S WATER? PFAS CONTAMINATION IN THE LOWER HUDSON VALLEY

By Gale Pisha

Eerily reminiscent of a scene from the 2019 movie *Dark Waters*, Rockland residents opened a letter from Suez Water New York in November informing us that levels of perfluorooctanoic acid (PFOA) in our drinking water exceed the New York State maximum contaminant level (MCL). We were assured, however, that drinking water at these levels "does not pose a significant health risk."¹

PFOA is one member of a class of chemicals called per- and poly-fluoroalkyl substances (PFASs). There are over 5,000 different PFASs, developed beginning in the 1940s by companies like DuPont and 3M for use in a wide variety of products including Teflon cookware, firefighting foam, electronics, food and textile production, plastic and rubber production, building and construction, stain repellents, polishes, paints and coatings.²

Why should we be concerned?

PFASs are persistent organic pollutants that have been detected in humans and wildlife worldwide. From epidemiological studies of industrial workers and communities exposed to high levels of these chemicals, these "Forever Chemicals" accumulate in humans and have been linked to adverse health outcomes, including thyroid disease, high cholesterol levels, kidney cancer, testicular cancer, ulcerative colitis and developmental effects on unborn children. Evidence indicates PFASs affect the immune system, reducing the effectiveness of vaccines, particularly worrisome during the COVID-19 pandemic.³ Some advocates say there are no safe levels of PFAS exposure.

Since the 1950s, 3M and DuPont were increasingly aware of the health impacts of these chemicals but kept the information private while they came up with more ways to use them.⁴ Even as recently as 2018, the Trump administration and Environmental Protection Agency (EPA) attempted to suppress a study showing that PFASs were more dangerous than previously thought and that many of the contaminated sites are on military bases across the U.S.⁵

How do we avoid exposure?

PFOA has been shown to have a half life, meaning the time required for a quantity to reduce to half of its initial value, of 3.5-3.8 years for PFOA, while other members of this class have been found to take up to 8.5 years to reduce levels by half.⁶ This assumes that direct contact with the chemicals ceases, otherwise levels in the blood increase faster than they can be

eliminated. The good news is that if we can eliminate PFASs in our environment, our blood levels will eventually decrease.

Water companies have been successful in treating PFAS contaminated water sources by techniques like granular activated carbon and ion exchange filtering to remove or bind it but not destroy it.⁷ New technologies are being tested to transform or destroy the chemicals, including electrochemical oxidation. Incineration does not always break down PFASs, which is why the chemicals have been used in firefighting foam and fire-resistant coatings, and incineration can send PFASs into the air that eventually get deposited on soil and in water.

How can we reduce our personal exposure? Three main ways PFASs enter our bodies are through our drinking water, through firefighting foam and industrial discharges into our air and water, and through food and food packaging. Sixteen million Americans in 33 states and Puerto Rico have polluted tap water while PFASs are present in groundwater of 38 states.⁸ While industry is replacing PFOA and other long-chain PFASs with short chain members

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Membership Meeting Schedule

**PFAS in Rockland's drinking water -
January 7, 2021, at 7 pm**

**Zoom event - Visit SierraLowerHudson.org
for details**

**This event will take about
an hour, with a chance to
interact with presenters.**



**Visit SierraLowerHudson.org > Events
Visit RocklandSierraClub.org**

Join us to work on environmental issues in Rockland County!

Rockland Sierra Club was one of the groups leading the successful effort to defeat plans to desalinate Hudson River water for Rockland's drinking water. We are now helping the County craft a sustainable water management policy. We are also working to limit new fossil fuel infrastructure such as Pilgrim crude oil pipelines, and have partnered with 350.org on efforts to address climate change through divestment and through promoting Climate Smart/Clean Energy Communities programs for towns and villages.

Rockland Sierra Club usually meets during the first week of each month. Check RocklandSierraClub.org for dates and locations. For more information: pkurtz9@gmail.com or deby1012@gmail.com. Or call 845-709-0802.

New Threat to Rockland's Water?...continued from page 1

in the family which might be less resistant to breaking down, the new compounds still appear to be toxic.

1. Avoid items that say "nonstick" or "waterproof," reduce the amount of fast food you consume, and check labels of beauty products and even dental floss for chemicals starting with "fluoro."
2. Contact the producers of brands that contain PFASs and ask them to stop using these ingredients. This will reduce the demand for their production.
3. Push for stronger legislation from our federal and state governments to ban these "Forever Chemicals" and clean up polluted sites.

What is Sierra Club doing?

Sierra Club is responding on the federal, state and local level. Nationally, the Club is advocating for the current EPA MCL for PFOA in drinking water of 70 parts per trillion (ppt) to be lowered, which will force more water companies to clean up contaminated water supplies.

In NYS, Sierra Club Atlantic Chapter has worked with coalition partners to:

- lower MCLs in the state (Governor Cuomo announced a new MCL of 10 ppt in July, 2020⁹)
- ban PFASs in firefighting foam (law passed and signed in 2019)
- ban incineration of firefighting foam, which the Department of Defense had been sending to Cohoes, NY (law passed in June, 2020, signed by governor on November 23) and
- ban PFASs in food packaging (passed in July, 2020, signed December 2).

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Rockland Sierra Club website: RocklandSierraClub.org

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New Threat to Rockland's Water?...continued from page 2

In the unfortunate absence of a program to educate the public which should have been organized by the Department of Health, Department of Environmental Conservation and Suez, Lower Hudson Group's **Rockland Sierra Club is planning a public program in response to the contamination in Rockland's drinking water** identified in the Suez letter. The date is **Thursday, January 7, 2021 at 7:00 pm** (see Membership Meeting Schedule on page 1), but please check our website at SierraLowerHudson.org>Events for more details and for any changes as the date approaches. Westchester and Putnam members are welcome to join the virtual program, as well, since you are facing PFAS contamination near the Kensico reservoir, possibly from the Westchester Airport (see side box).

Our program will feature knowledgeable speakers including Judith Enck, former Region 2 Administrator of the EPA under the Obama Administration. We will ask questions including:

- How safe is our water to drink?
- Where is this contamination coming from? Can we stop it at the source?
- How safe is dilution, one of Suez's possible options for treating contaminated water?
- Should Suez be required to treat water from wells in which total PFAS levels are higher than 10 ppt even if PFOA is less than 10 ppt?

As Rockland becomes the first community in the state to have PFASs identified in excess of the new MCL, what we do now to protect ourselves will help determine the way this contamination is handled in the future by Governor Cuomo, state agencies and water utilities.

In Westchester, there's a PFAS/PFOA situation too: A NY Air National Guard unit was based at Westchester County Airport for many years. The ANG practiced firefighting with foam containing PFAS/PFOA in a burn pit, then departed for Stewart Airport in Newburgh in 1983. In 2017, PFAS/PFOA was detected in water wells adjacent to Westchester County Airport, and Westchester County immediately began dealing with this, under supervision of the NYS Department of Environmental Conservation. Plans are being finalized to begin remediation of soil under the airport soon. The Kensico Reservoir, very close to the airport, receives groundwater from the airport, but PFAS/PFOA has not been detected there, possibly because it has been diluted to below measurable levels. Sierra Club's Lower Hudson Group is a part of the Coalition to Prevent Westchester Airport Expansion, and the coalition is briefed regularly by the Westchester County government on the situation.

¹ Suez Water New York letter of November 6, 2020.

² https://en.wikipedia.org/wiki/Per-_and_polyfluoroalkyl_substances

³ <https://www.theguardian.com/world/2020/nov/17/chemicals-found-in-everyday-products-could-hinder-covid-19-vaccine>

⁴ <https://www.ewg.org/pfastimeline/>

⁵ <https://blog.ucsusa.org/michael-halpern/bipartisan-outrage-as-epa-white-house-try-to-cover-up-chemical-health-assessment> , <https://www.politico.com/story/2018/05/14/emails-white-house-interfered-with-science-study-536950>

⁶ <https://ehp.niehs.nih.gov/doi/10.1289/ehp.10009>

⁷ https://pfas-1.itrcweb.org/12-treatment-technologies/#12_4

⁸ <https://earthjustice.org/features/breaking-down-toxic-pfas>

⁹ <https://www.governor.ny.gov/news/governor-cuomo-announces-first-nation-drinking-water-standard-emerging-contaminant-14-dioxane> Note: this change in state MCL is what triggered the action by Suez.

PLANTING WESTCHESTER

An ambitious, innovative new program is being launched in Westchester by County Executive George Latimer. The County Administration, led by the Department of Energy Conservation and Sustainability (Director Peter McCartt) and the Planning Department (Co-ordinators Millie McGraw and Nikki Coddington) has undertaken to encourage planting and proper management of everything from forestland and street trees to community and container gardens on both public and private land. It will establish a unique collaboration between residents, elected officials of local municipalities, businesses, not-for-profits, chambers of commerce, houses of worship and schools to address issues such as food insecurity, heat islands, pollinator pathways and climate change.

The goal is to implement a website which will provide a best practices guide and links to how-to-videos, blogs, demonstration

projects with contact information, facts-based research and photos of native plants and trees.

To date, committees of volunteers with considerable knowledge and experience have been formed covering topic areas such as Trees, Combatting Invasives, Native Flowers and Shrubs, Backyard Vegetables and Fruits, Community Gardens, Trees, Planting by Waterways, Soil Health and Container Gardens. Eventually existing projects around the county will be documented and featured on the website.

The official launch date for the website is planned to be in spring, just in time for the planting season. Have questions or interested in being involved? Contact Linda Brunner from Sierra Club Lower Hudson Group (PW Steering Committee) at lokilamb@gmail.com.

HOW CORONAVIRUS (AND OTHER HUMAN DISEASE) IS RELATED TO CLIMATE CHANGE

By Carole Upshur, EdD

Sixty to seventy percent of new human infectious diseases come from animals. These diseases, called zoonoses, include the coronavirus, influenza, AIDS, Ebola, rabies, a variant of Creutzfeldt-Jakob disease, and bubonic plague.

Why does climate matter?

- A warming climate increases the range of insects and other species that can bring new diseases to areas like the Lower Hudson Valley.
- Warming climate and population growth disrupt the ability of subsistence farmers to grow crops, resulting in their migration to clear forests, putting them in contact with wild animals that carry diseases not previously transmitted to humans.
- As wilderness areas decrease, wild animals migrate to populated areas, increasing their contact with humans.
- Air pollution, environmental toxins, and extreme weather affect how well our bodies can cope with diseases like coronavirus.

The possible role of bats in coronavirus.

One theory about origins of the coronavirus is from bats. Unfortunately, humans can easily catch viruses endemic to bats. Bites can happen anywhere, but cultural preferences for wild meat or medicinal cures from wild animals increase human-bat contact. Wet markets, with various species kept in cages near each other and slaughtered on the spot, provide opportunity for transmission of airborne and blood-or feces-borne pathogens across species or directly to humans.

What other climate-related diseases have reached The Lower Hudson Valley?

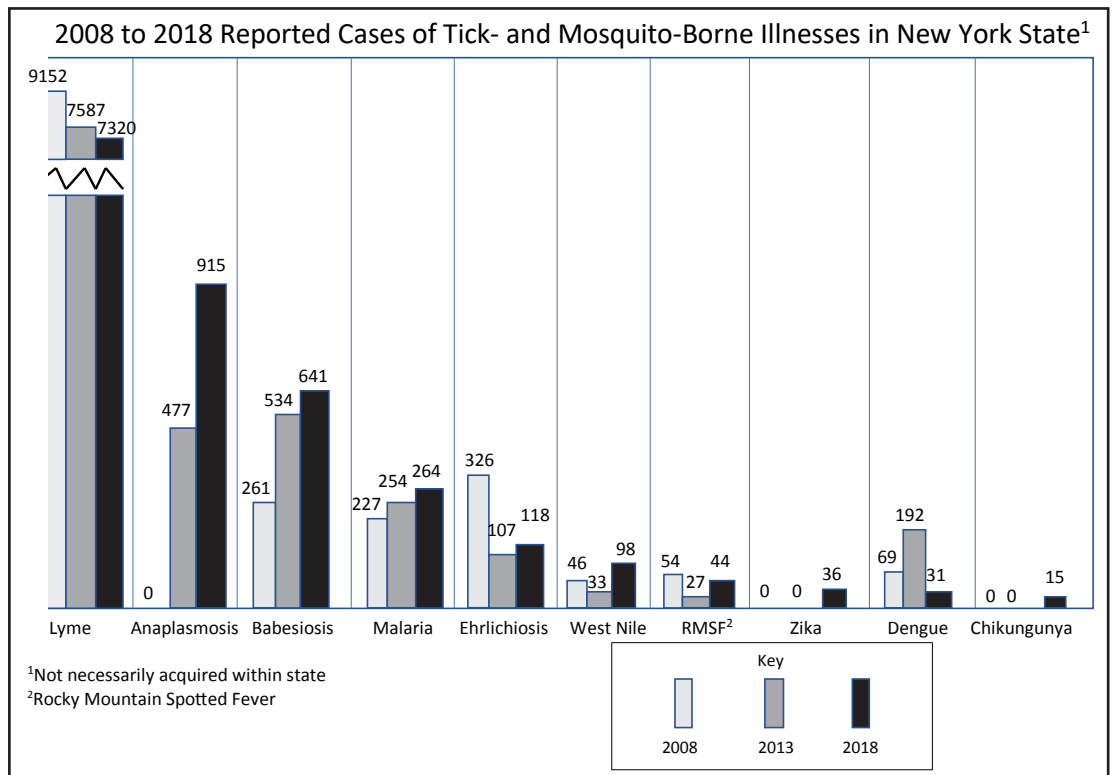
Most new diseases in our area come from ticks. There has been a 65% increase in recent years in diseases from tick-borne parasites, bacteria, and viruses. In 2019, 56% of ticks collected in Westchester and 76% in Rockland County by the New York State monitoring project carried Lyme bacteria, 4% and 26% respectively carried Babesiosis, and 6% and 12% respectively carried Anaplasmosis. (No samples are collected in Putnam County). Anaplasmosis mimics some COVID-19 symptoms, such as aches and fevers. It can be easily treated with a common antibiotic, so it's currently important to get tested for it as well as COVID-19.

The most common tick-borne illness, Lyme disease varies in rates from year to year depending on the tick population. This depends on the weather (length and depth of freezes) and the distribution of mice and deer that spread the ticks. Interestingly, in the Lower Hudson, the number of opossums also matters since they attract ticks to their fur but are very effective in removing them, eating up to 4000 a week according to the Cary Institute.

Another major vector for human disease is mosquitoes. New York City had the first U.S. outbreak of West Nile virus, a mosquito-borne disease that transmits through birds. While the CDC reports no human cases so far this year in New York, there are a number in surrounding states, and it has been detected in local birds and mosquitoes. Eastern equine encephalitis (EEE) is also a rare mosquito borne illness that has reached New York. There have been no cases since 2011, but it is usually fatal. Mosquitoes carrying Dengue fever and Zika do not breed in the Northeast yet but are spreading throughout the southern US.

An even rarer fatal animal-to-human disease is Creutzfeldt-Jakob variant, which is a brain disease caused by a prion, a cell protein found in diseased deer and cows. In the 1990s a few people in Britain died of the disease, called 'mad cow,' which was detected in beef grown for human consumption. While the USDA now has strict screening protocols to detect its presence to keep it out of the food chain, a recent New York Times article

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Data in chart from NYS Department of Health; RMSF=Rocky Mountain Spotted Fever. Note: Cases are diagnosed but not necessarily contracted in NY.

How Coronavirus (and other human disease) is Related to Climate Change...continued from previous page

described how it's becoming more prevalent in deer and elk in the Yellowstone National Park area. Hunters who consume meat of a diseased animal can acquire the disease. The prion is not destroyed by cooking and the disease is fatal. It is believed that it flourishes when there aren't enough predators like wolves to cull weaker/diseased animals and there is a current study to see if using wolf packs near large populations of herd animals can reduce the incidence. Diseased deer have been found in New York State, but not since 2005, and the state is credited with eliminating it from the deer population through monitoring.

How can we protect ourselves?

We need to follow coronavirus precautions and keep up with all vaccinations, especially for influenza, which many of us don't take seriously enough. We need to be tick and mosquito smart outdoors: staying on trails, wearing long-sleeved clothing, using insect repellent, and doing tick checks of children and dogs.

We also need to support investment in climate change amelioration, public health, and scientific infrastructure—including monitoring like New York state does of deer, ticks and mosquitoes—to detect known and possibly new pathogens. Monitoring of commercial agriculture animals in the US and abroad is also important since some pathogens from the wild first infect pigs, cows, and poultry, which in turn pass disease on to humans.

Carole Upshur, EdD, is Professor Emeritus, Department of Family Medicine and Community Health, University of Massachusetts Medical School and a member of the Bronxville Green Committee.

An earlier version of this article appeared in myhometown bronxville.com on July 29, 2020.

WHAT FRUIT HAS MORE VITAMIN C THAN AN ORANGE?

By Gail Dutan

RED BELL PEPPER! It's actually classified botanically as a fruit. One cup of sliced raw red bell pepper contains 117mg of vitamin C, compared to one medium orange which has 69.7mg.¹ The RDA for vitamin C is 75mg per day for women and 90mg per day for men.²

Vitamin C helps the immune system function properly, helps with iron absorption, wound healing, and keeping cartilage, bones and teeth in working order. Now more than ever, supporting a healthy immune system is key. Even though fruit is thought to have the most vitamin C, it also can raise glucose levels, which competes with vitamin C for entry into your cells.³ The vitamin C never makes it in there. Enjoy the recipe below featuring red bell pepper and cheeses from McGrath Cheese Company!

¹ <https://www.verywellfit.com/oranges-nutrition-facts-calories-and-health-benefits-4119322>

² <https://articles.mercola.com/sites/articles/archive/2020/08/08/vitamin-c-in-red-bell-peppers.aspx>

³ http://www.jmrps.net/eJournals/_eJournals/79_REVIEW%20ARTICLE.pdf

STUFFED RED BELL PEPPERS WITH GROUND BEEF* & CHEESE

INGREDIENTS

4 (1¼ lbs) red bell peppers
2 tbsp olive oil
4 oz. (2/3 cup) yellow onions, finely chopped
3 garlic cloves, finely chopped
pinch of salt
1 lb ground beef (*tempeh can also be substituted)
¾ tsp salt
¼ tsp ground black pepper
1 tbsp dried basil
¾ cup (6½ oz.) crushed tomatoes
3 oz. (2¾ cups) baby spinach
7 oz. (1¾ cups) shredded cheese such as **McGrath Cheese Company's "Rascal," "Goliath," or "Hootanany" style cheeses**
olive oil, for greasing

Garnish

¾ cup **McGrath's Cultured Creamed Milk** or sour cream
2 tbsp fresh parsley, chopped (optional)
3 oz. (1½ cups) greens

DIRECTIONS

1. Preheat the oven to 400°F. Grease a baking dish, that will fit the number of bell peppers being prepared, with olive oil.
2. Cut off the tops of the peppers and discard the stems, membranes, and seeds. Place the peppers in the baking dish, cut side up.
3. Heat the olive oil in a large frying pan, on medium heat. Sauté the onions for about 5 minutes or until soft,. Then add the garlic and a pinch of salt. Cook for about another minute.
4. Add the ground beef, salt, black pepper, and basil to the pan, and let it cook about 7-10 minutes, or until the beef is cooked through. Reduce the heat to medium-low, and mix in the crushed tomatoes and spinach. Cover, and simmer for 10 minutes, and then remove from heat.
5. Stuff the red bell peppers with the beef mixture, leaving about 1/4" (1/2 cm) space at the top to place the shredded cheese. Bake on the middle rack for 25-30 minutes, or until the cheese is melted and golden.
6. Garnish with fresh parsley, a dollop of cultured creamed milk, and greens on the side.

LOCAL ARTISAN SPOTLIGHT:

McGrath Cheese Company, Hudson Valley, NY

www.mcgrathcheese.com



Born out of his love for cheesemaking, Colin McGrath started the company after graduating from the Culinary Institute of America. The company hand crafts its cheese only from the best local dairy farms. Their cheeses can be found all over the state at farmer's markets,

restaurants and shops. Go to <https://mcgrathcheese.com/where-to-find-us> to locate their delicious cheeses.

ALL POLITICS ARE LOCAL

by Ed Berry, Lower Hudson Group Political Chair

That “All Politics Are Local”, attributed to Tip O’Neill, Speaker of the House 1977 to 1987, seems to be a simple statement of fact. We, as voters, are motivated by local concerns, the things that affect us on a daily basis. I would concur.

As voters and concerned citizens we grew tired of the daily outrages emanating from Washington, the dismantling of environmental protections, the ignoring of proven scientific knowledge, the blatant corruption leading to the degrading of our air, water and even civil discourse. Yes, folks rose up and voted in every way: early voting, absentee ballots, and in person on the day of.

Nationwide there was an outpouring of energy that resulted in the election of the Biden-Harris ticket. Closer to home we elected two new Congressmen in our Area. We look forward to many years of working with Mondaire Jones (CD 17 in Rockland, Westchester) and Jamaal Bowman (CD 16, Westchester, the Bronx). Both gentlemen are dedicated to a pro-environmental agenda and are eager to get to work. As of this writing we have been assured of Peter Harckham’s victory in the 40th district of the NY Senate (northern Westchester, Putnam, Dutchess). Elijah Reichlin-Melnick will represent the 38th district in the NY Senate, an open seat currently held by David Carlucci.

Senator Andrea Stewart-Cousins returns for another well deserved turn as NY Senate Majority Leader, this time with a veto-proof majority. All of our other endorsed candidates were returned to office and are listed on the adjacent chart.

One exception is Assemblywoman Ellen Jaffee. Sierra Club would like to take this opportunity to thank her for her many years of service. She was devoted to our shared goal of protecting the environment.

Also, in January we bid farewell to Nita Lowey and Eliot Engel, Congressional representatives for CD 17 and 16. We thank them for their untiring years of effort for us, their constituents. We wish them continued health and happiness in their next endeavors.

Finally, all of this happens because YOU the citizen, the voter, stays involved. Citizens create the republic we all live in.

Seat	Area	Endorsed Candidate	Result
President	National	Joe Biden	Won
Vice President	National	Kamala Harris	Won
NY Congressional District 16	Northern Bronx, Southern Westchester	Jamaal Bowman	Won
NY Congressional District 17	All of Rockland and most of Westchester from Dobbs Ferry, Hartsdale, White Plains, Harrison, Portchester, Purchase, Mt Kisco and Yorktown Heights and towns north and west	Mondaire Jones	Won
NY Senate District 34	Bronx, Pelham, Bronxville, Mt Vernon, New Rochelle	Alessandra Biaggi	Won
NY Senate District 35	Yonkers, Tarrytown, Dobbs Ferry, Irvington, Hastings, Eastchester, White Plains, New Rochelle	Andrea Stewart-Cousins	Won

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All Politics are Local...continued from previous page

Seat	Area	Endorsed Candidate	Result
NY Senate District 37	Bronxville, Larchmont, Harrison, Mamaroneck, Port Chester, Rye Brook, Tuckahoe, Bedford, Eastchester, Harrison, North Castle, Mamaroneck, Yonkers, White Plains, New Rochelle, and Rye	Shelley Mayer	Won
NY Senate District 38	Towns of Clarkstown, Orangetown, Ramapo in Rockland, and Ossining in Westchester	Elijah Reichlin-Melnick	Won
NY Senate District 39	Newburgh, Harriman, Monroe, Woodbury, Walden, Orange Lake, Harriman, Chester, Haverstraw, Stony Point	James Skoufis	Won
NY Senate District 40	Beekman, Pawling, Carmel, Patterson, Southeast, Brewster, Peekskill, Cortlandt, Lewisboro, Mount Pleasant, New Castle, North Salem, Pound Ridge, Somers, Yorktown, Mount Kisco, Briarcliff Manor, Buchanan, Croton-on-Hudson, Pleasantville and Sleepy Hollow	Peter Harckham	Won
NY Assembly District 88	Scarsdale, Eastchester, Tuckahoe, Bronxville, Pelham, Pelham Manor, and parts of New Rochelle and White Plains	Amy Paulin	Won
NY Assembly District 89	Mt Vernon, Yonkers	J. Gary Pretlow	Won
NY Assembly District 91	Larchmont, Mamaroneck, New Rochelle, Port Chester, Rye and Rye Brook	Steve Otis	Won
NY Assembly District 92	Greenburgh and Mount Pleasant	Thomas Abinanti	Won
NY Assembly District 93	City of White Plains, Village of Harrison, Village of Mount Kisco, and the towns of New Castle, North Castle, Bedford, Pound Ridge, Lewisboro and North Salem	Chris Burdick	Won
NY Assembly District 95	Cold Spring, Peekskill, Ossining, Croton, Kent	Sandy Galef	Won
NY Assembly District 96	Towns of Clarkstown and Haverstraw and a portion of the Town of Ramapo	Kenneth Zebrowski	Won
NY Assembly District 97	Nyack, Orangeburg, Montebello, Stony Point, Haverstraw, Pomona, Suffern, Spring Valley, New City, Valley Cottage, Nanuet, Sloatsburg	Ellen Jaffee	Lost



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WESTCHESTER, PUTNAM & ROCKLAND COUNTIES

"Because no matter who we are or where we come from, we're all entitled to the basic human rights of clean air to breathe, clean water to drink, and healthy land to call home." -- Martin Luther King III



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