



CHESAPEAKE ENVIRONMENTAL PROTECTION ASSOCIATION, INC.
P.O. Box 117, Galesville, Maryland 20765

NEWSLETTER

Winter 2018-2019

PRESIDENT'S MESSAGE

By Al Tucker



It's really hard to talk about lack of water when we have just had the wettest year in recorded weather history. But as those of you who follow CEPA's interest in the decline of the aquifers in Anne Arundel County and Southern Maryland know, the vicissitudes of weather have little impact on the levels in the confined

aquifers that serve as our primary sources for drinking water. In spite of the weather, the decline continues unabated¹. And this decline poses the question: are we using the groundwater in our aquifers sustainably? And a follow-up question: Is it possible to slow the decline without impacting growth? The answer to the first question is we don't really know, but there is a prima facie case that we are not.

CEPA intends to address the second question at our next Forum later this spring. We will introduce a concept to recharge our local aquifers with purified wastewater. This process, called Managed Aquifer Recharge (MAR), may seem controversial at first glance, but it is being piloted and implemented throughout the US and around the world. It has the potential to support not only the sustainable use of groundwater but also to solve several ancillary issues such as nutrient loading and land subsidence – perhaps even presenting the most economical solution for each.

Since our area has few industrial users, the aquifer decline correlates primarily with the population increase. We recognize that limiting growth will clearly have ancillary environmental benefits beyond minimizing the impact on our water supply, yet, a growth limit will not resolve future challenges to using aquifers sustainably. These challenges include the increase in impervious surface, saltwater intrusion, and sea level rise. These challenges may be interrelated, but solving one will not necessarily resolve the others.

In Anne Arundel and Southern Maryland, all public and private users extract water from the confined aquifers. The coastal

aquifer system may be buried deeply where you live, but the pressure in the aquifer can cause it to rise within a few feet of the surface. A century ago many area wells were artesian or free-flowing at the surface. The water in the wells was maintained by the ability of the recharge areas to supply a sustainable amount of water to down-aquifer users. In the 1970s, the area population exploded and the wells began to show an immediate impact. The distribution of people throughout the region, though, was not uniform. Northern Anne Arundel experienced the largest growth. Unfortunately, the recharge areas for the aquifer system lie mostly between Annapolis and Baltimore. With the rapid suburbanization and development came the increase in impervious surface, which interrupts the natural flow of water recharging the aquifers.

The rapid rise in population has had an added effect. The water in the aquifers where you live is thousands to millions of years old. This is because the water-flow in the aquifers is extremely slow, in many cases just a few tens of feet per year. As a result, we are using water faster than the natural system can resupply it. When the levels drop, especially in areas where it is below sea-level, saltwater intrudes into those aquifers that terminate in the Bay or the ocean. As I have given talks and met some of you, I am always amazed by the number of people who have had to re-drill their wells as a result of drawdown or saltwater intrusion.

The first question of whether or not the aquifers can provide a sustainable water supply to support the future population remains unanswered². Can we wait until there are more signs of wells reaching their limits? Probably not! The Maryland Department of the Environment recently notified Charles County that their water supply is insufficient to meet their future needs.

In last year's winter newsletter, Bill Klepczynski described a new technology for recharging aquifers in the Hampton Roads Sanitary District. In the fall, a small group of CEPA board members, along with the Anne Arundel County Department of Public Works, had the opportunity to visit this pilot project called Sustainable Water Initiative For Tomorrow [SWIFT]³. The SWIFT project is of interest to us since it operates in the same aquifer system and addresses similar problems facing Anne Arundel County, namely failing septic fields, saltwater intrusion, land subsidence, and decreasing availability of freshwater.

The concept is simple: by injecting purified water into the recharge areas of the aquifers, the water pressure in the aquifer

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¹ I did a quick check of water levels in representative wells in So. MD and it shows that the past year's water levels remain at or near their historic lows.

² The Maryland Geological Study on Groundwater Sustainability is on hold due to lack of funding,

³ Klepczynski, W., CEPA newsletter, no. 40 Winter 2017-2018

is increased. This pressure increase boosts the flow of freshwater and counteracts the seawater pressure to inhibit saltwater intrusion. The extra steps in the purification process reduce nutrient levels further, thus contributing toward meeting the county's TMDL goals. While the overall benefits seem attractive, there are several topics of public concern that will need to be addressed. All public water supply systems are required by the EPA to monitor for specific chemical contaminants, but there exist several contaminants like pharmaceuticals, endocrine disruptors, and microplastics that are not monitored. In order not to permanently damage the aquifers, the MAR process will need rigorous testing for contaminants not listed by the EPA.

At the forum, we intend to have a speaker from the Hampton Roads Sanitary District describe their experience to date. Currently, Anne Arundel County is exploring the use of this technology to address the anticipated decline of its aquifer system and saltwater intrusion, as well as the impact of using the technology to meet TMDL goals. Of critical public concern will be the cost of implementing it. Chris Phipps, the Director of Public Works for Anne Arundel County will discuss a proposed study program to determine if MAR is technically and economically feasible for Anne Arundel County.

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OUR WILDLIFE IS DISAPPEARING

By Gary Antonides



We have all heard about how certain species of wildlife have declined in number over the years, but a recent study, looking at wildlife numbers in general, came to a startling conclusion. The WWF (World Wildlife Fund) issues a report every two years on the state of the planet and its wildlife. In their "Living Planet Report 2018," they say that between 1970 and 2014, only 44 years, 60% of the world's wild mammal, bird, fish, reptile, and amphibian populations have disappeared. Only 40% remains. Since humans' own lives depend on the health of the planet and the biodiversity of both plant life and animal life, it's disturbing that so little has been done about it. These monumental changes in wildlife and the planet's health are generally being ignored or even exacerbated by the present administration.

The Convention on Biological Diversity is an international treaty dating from 1992, composed of 196 countries (including the U.S.) that is working on goals for the future. Almost 40 universities, conservation and intergovernmental organizations are now trying to understand the trade-offs in the path forward and to model our ecosystems to provide guidance to governments. The results of this effort will be discussed in a future edition of WWF's "Living Planet Report."

The 2018 WWF report says there has been a "Great Acceleration," which is an explosion in human activity, socially, economically, and ecologically, and which has affected the Earth's "life support system" (clean air, clean water, forests, food sources and more). They consider that the Great Acceleration started in 1950, but, the data indicate that, since 1970, the world population has almost doubled, the world's GDP has more than tripled, energy use has doubled, fertilizer use has doubled, and water use is about 50% higher. At the same time, carbon dioxide is up 17%, methane is up 29%, ozone has more than tripled, surface temperature is up 0.9 degrees F, ocean acidification is up 14%, and fish harvests are up 40%.

The report stresses that the 60% decline in wildlife cited is the overall decline. In places, the decline of wildlife is much worse. It is 89% in Central and South America. Freshwater species worldwide have declined 83%.

On a positive note, the *Washington Post's* daily email *PowerPost – The Energy 202* on Jan. 9 reported that the Center for Biological Diversity intends to sue the Trump Administration for failing to protect 26 animal and plant species under the Endangered Species Act.

In the December issue of the *Bay Journal*, Joel Dunn, President & CEO of the Chesapeake Conservatory, advocates that we consider a Native American philosophy of planning and acting with the next seven generations in mind. He also advocates a plan proposed by conservationist E. O. Wilson, author of "Half-Earth," that we save half of the surface of the Earth, land and water, to maintain nature. Applying this to the Chesapeake Bay watershed, where 22 percent of the land is now conserved, and 11 percent is fully developed, we could still develop 39 percent for future growth and other needs of society. A number of government and private organizations are setting aside land for conservation, but 28 percent still needs to be conserved (which should exclude hunting). As development continues, we need to set goals of this nature to keep development in check.

Even though this article basically considers what has happened during our lifetimes, that is only a continuation of what's been happening for hundreds of years. "An Environmental History of the Chesapeake Bay with Victor Kennedy" (<https://www.press.jhu.edu/news/blog/environmental-history-chesapeake-bay-victor-kennedy>) talks about the Bay being an immense protein factory 150 years ago. It says if we are unfamiliar with the extent of the changes over the longer time frame, our reference point, or baseline, for restoring the Bay may be set too low. Ecosystems can deteriorate so gradually that each human generation affected by the changes takes its present situation as the norm or baseline.

Up until the late 1800s, the Bay fed multitudes and supported an extensive infrastructure of boats, harvest gear, processing facilities, many trades, and transportation networks – very much more so than it does now. As the fisheries were over-exploited, the bounty was squandered, so it is now necessary to ban the harvesting of shad, river herring, sturgeon, and terrapins and set strict limits for waterfowl. Kennedy, an emeritus professor at the University of Maryland Center for Environmental Science, urges

us to consider the Bay from way back then as well as our own frames of reference when setting goals for cleaning up the Bay.



The next 40 or 50 years are likely to have an even more deleterious effect on wildlife. In addition to the habitat destruction and overharvesting that has been occurring, wildlife will also have to contend with increasing climate change. There are already many examples of how warming has affected wildlife populations, sometimes helping, but more often hurting them.

As an example, a November 2018 article in National Geographic by Craig Welch, "A Crack in the World," talks about the effects of warming on the 800-mile-long Antarctic Peninsula, where humans are almost nonexistent, but many changes are nevertheless happening. The Antarctic Peninsula is the most temperate part of Antarctica, is home to teeming wildlife, and along with the Arctic, is heating up faster than almost anywhere else -- more than 10 degrees F in the winters since the 1950s. The ice-free season here is 90 days longer than it was in 1979. The warming is changing what the animals eat, where they rest, how they raise their young, and how different species interact.

Humans are affecting the situation by harvesting the shrimplike krill that form huge swarms and sustain nearly all Antarctic wildlife. Norway, South Korea, China, Chile, Ukraine and others participate in that fishery. In the past humans also harvested fur seals, elephant seals, sei whales, blues, fins, and humpbacks, and most of those populations are significantly depleted. The krill is arguably the most important now since it is the base of the food chain for most wildlife in the area. The 2-inch-long krill become dietary supplements, pharmaceuticals, and fish food for fish farms and aquariums. So far, the amount of krill fished from Antarctic waters is a small fraction of the total krill population, but there is growing concern that they're being harvested in the same areas where wildlife feeds. There is talk about restricting fishing in some areas such as near penguin breeding grounds.

Warmer ocean currents are melting the ice shelves and glaciers on the Antarctic Peninsula, and they are losing six times as much ice as they were four decades ago. Without the ice, the sun warms the ocean even more. Warmer air temperatures often bring rain instead of snow, which used to be very unusual.

The effects of warming on wildlife include a 90% decline in Adelie penguins on the western side of the peninsula. They are acclimated to freezing weather, and now melting ice and rain drown the eggs in their nests and soak the downy fur of babies before they develop water resistant feathers, so they freeze.

Adelies used to eat the sardine-like Antarctic Silverfish, but they are almost gone now, and they rely mostly on krill. Ice provides a place for Adelies to avoid being eaten by leopard seals. (Elsewhere on the peninsula, Adelies are doing well.) On the other hand, a different species, Gentoo penguins are acclimated to milder conditions, have a more varied diet, and are thriving.

Humpback whales are also thriving in the area because there is more ice-free ocean which they need to feed on krill. Minke whales, however, are at a disadvantage because they feed on krill under the ice, and the ice cover protects them from orcas. Seals also need the ice -- they climb on to escape killer whales.

The Washington Post's daily email "PowerPost – The Energy 202" on Jan. 9 also reported that all of the world's oceans are warming at a faster rate than was previously thought. A new analysis published in the journal *Science* found oceans are warming on average 40 percent faster than what a United Nations panel estimated just five years ago. Oceans have broken records several years in a row, says the report.

Species will respond to climate change by: (1) adapting to a warmer climate, (2) moving to a colder climate, or (3) perishing. Certainly ecosystems will be forever altered, but it is difficult to predict which species will be harmed and which will not.

Climate change not only affects animal wildlife directly, but it affects the plant life they depend on. Some organizations are studying how to adapt to changes that can wipe out entire species of trees or bushes in an area. Only recently have scientists started to seriously consider "assisted migration" as warmer weather encourages pest invasions and tree die-offs in many national parks. Rather than take a chance on what types of plants will take hold, they feel that choosing what species to move into damaged areas may be smarter. This is very tricky because, among other things, different tree species will host different animal species. There have always been changes due to fires, acid rain, pest invasions and other factors. And there continues to be migration of plant life that keeps forests generally healthy. But studies and projections are beginning to show that the expected climate change will be too rapid for successful migration of certain species. The Jan/Feb 2019 issue of "Sierra" from the Sierra Club reports on experiments in Acadia National Park in Maine. Studies project that red spruce, northern white cedar, and balsam fir will forfeit large portions of their ranges, and tamarack, white and black spruce, and balsam poplar may be extinct by the end of the century. Experimental plots of tulip tree, sweet gum, black locust and others have been studied to provide a basis for possible future assisted migration.

There are some drastic adaptations being discussed for when the climate gets to the point where things like crop failures and heatstroke threaten the lives of millions of people. "Solar Radiation Management" is the injection of small particles into the upper atmosphere to have the same effect as a volcanic eruption, cooling global temperatures. Another measure is the large-scale removal of carbon dioxide from the air. These will probably happen only when humans are directly threatened. By then, there is no telling what the state of wildlife on the planet will be. As that issue of "Sierra" states: "There is no Planet B."

WATER RESOURCES AND THE ANNE ARUNDEL COUNTY 2009 GDP

By Bill Klepczynski



Chapter 10 of the 2009 GDP (General Development Plan) is devoted to Water Resources and the means to insure their adequacy over the duration of the GDP. The items usually involved when referring to the term Water Resources are:

1. A safe and **ample supply of drinking water** for *existing and future development*;
2. **Adequate treatment of wastewater** for *existing and future development*; and
3. Minimized **nutrient loading from wastewater treatment plants, septic systems and storm-water runoff** for *existing and future development*.

Water Resources is one topic that will play a very important role in the 2040 GDP (Plan2040) as it did in the 2009 GDP. Maryland requires a Water Resource Element (WRE) to be included into each county's GDP to insure that water resources will meet planned growth. The writers of the 2009 GDP pointed out the advances that Anne Arundel County (AAC) had made since the 1997 GDP. The 2009 GDP provided a summary of the County's water supply and wastewater treatment capacities, septic systems, and storm-water management capacity.

A preliminary draft of Plan2040 is scheduled for the Citizens Advisory Committee (CAC) review in April, and for public comments in May or June 2019. The CAC will be using several references or input documents, such as the 2009 GDP, Master Plan for Water Supply and Sewerage Systems (2018) and the Water Resources Background Report for 2040.

ADVANCES CITED IN THE 2009 GDP

The next 3 sections highlight some of advances cited in the 2009 GDP that were made over the previous 10 years.

1. Watershed Protection and Stormwater Runoff (Nonpoint Source Runoff)

Pollutant loadings from nonpoint source runoff were estimated by the County for use in preparing its Watershed Management Plans and Nutrient Reduction Implementation Plans based on current and future land use plans. The pollutant loading analysis utilized data layers such as landcover, the Land Use Plan, stormwater management coverage, impervious coverage, soil infiltration rates, rainfall, and pollutant event mean concentration, among others.

The nitrogen and phosphorus loads for the 2004 and 2009 Land Use Plans were estimated for three watershed areas in the County. The nutrient loads in these watersheds experienced little change between the 2004 and the 2009 Land Use Plan, thus implying the adequacy of their planning model.

2. Water Supply

The 2009 GDP points out that the existing water supply primarily comes from groundwater supplied by the confined Patuxent, Patapsco, Magothy and Aquia aquifers; however, some of the water that serves residents in the North County area is purchased from Baltimore City and comes from surface water sources. Although the groundwater supply is not very vulnerable to decline due to drought, water levels in all of the confined aquifers supplying the County have been declining for several decades due to population growth and increased use. Continued water level declines could affect the long-term

sustainability of ground-water resources, particularly in areas projected for heavy growth. However, a Maryland Geological Study (MGS) study has concluded that sufficient groundwater is available to supply the projected demand through the year 2040.

In regard to future growth, the potential constraints for the water supply are the ability to continue to purchase water from the City of Baltimore, and the adequacy of groundwater resources to serve additional growth in southern AA County, which is part of the County's designated Rural Area, and where large-scale or high-density development projects are not planned. Still, there may be additional low-density development that would be served by private individual wells. The County continues to participate in regional planning efforts to monitor and protect groundwater resources.

3. Septic Systems (On Site Sewage Disposal Systems (OSDS))

The 2009 GDP points out that there are approximately 40,700 individual septic systems in the County. A little more than half of these are located in an area designated for no public sewer service. The remaining systems are located in an area ultimately to be served by a public sewer service.

The County contracted for a study to evaluate available options to improve service for those properties with an OSDS. The study recommended four possible treatment approaches:

- a) Sewer System extensions with treatment at existing centralized wastewater reclamation facilities upgraded for enhanced nutrient removal (ENR),
- b) Cluster wastewater treatment facilities,
- c) Upgrade each individual OSDS to include ENR, and
- d) No near-term action, since low-density results in low-nitrogen delivery with onsite systems.

MITIGATION PLANS

The next four sections discuss the mitigation plans contained in the 2009 GDP.

1. Water Supply

A pilot study conducted for Southern Maryland recommended:

- a) A regional, multi-aquifer groundwater flow model to assess water supply and impact of future withdrawals;
- b) Additional monitoring of wells near large pumping centers to verify model predictability;
- c) Developing standard methods of data collection, storage and transfer for domestic wells; and
- d) Evaluating the appropriateness of the 80% management level in aquifers close to recharge areas.

2. Water Reclamation Facilities

In order to provide improved wastewater treatment facilities, the 2009 GDP proposed the following goal:

Goal: Provide the highest level of wastewater treatment capabilities economically achievable in order to reduce pollutant loads to area tributaries.

This is to be achieved through the following **actions**:

- a) Complete ENR upgrades at Water Reclamation Facilities per agreement with MDE;
- b) Determine the ability to increase treatment capacities at Water Reclamation Facilities using the "bubble permit" concept (establish limit for overall pollution rather than for individual pollutants); and
- c) Identify weaknesses in pipe infrastructure and explore the development of a more reliable power back-up solution for pumping stations.

3. Septic Systems

In order to provide increased reductions in nutrients, the 2009 GDP proposed the following goal:

Goal: Achieve significant reductions in nutrient loads from OSDSs (with particular emphasis on reduction in the Severn River, South River, Magothy River and Bodkin Creek watersheds where nutrient loads are the most significant).

This is to be achieved through the following **actions**:

- a) Develop a short and long-term strategic plan for implementing the recommendations from the OSDS Study to address problem septic areas, based on the priorities identified in that study. This will require feasibility and engineering studies, public outreach, and potentially other planning studies for the OSDS management areas, as well as funding strategies.
- b) In conjunction with the above, apply for funding through the State's Chesapeake Bay Restoration Fund program to implement the OSDS strategies
- c) Update the map of Onsite Wastewater Management Problem Areas in the Water and Sewer Master Plan.
- d) Explore additional funding techniques that can be used for community connections to public sewer or installation of private community systems in known problem septic areas.
- e) Communities served by OSDSs that are identified as problem septic areas should be planned for public sewer if feasible, or community treatment systems should be installed, regardless of the Land Use Plan and zoning. Extension of public sewer in such cases will not be considered justification for changing the Land Use Plan or zoning, and should not be considered as inconsistent with the GDP.
- f) Where extension of public sewer is the most feasible alternative for a problem septic area, determine whether denied access sewer lines are warranted.
- g) In addition, add these communities to the Priority Funding Area where possible so they will be eligible for Bay Restoration Fund grants for public sewers.
- h) Provide information to homeowners and business owners regarding the importance of regular maintenance to septic systems.
- i) Develop a more streamlined petition process for community connections to public sewer.
- j) Evaluate the feasibility of code revisions to require all new or replacement private septic systems to utilize the latest standards for denitrification. Currently this requirement applies only within the Critical Area.

4. Nonpoint Source Loads (Stormwater Runoff)

In order to provide improved handling of Stormwater Runoff procedures, the 2009 GDP proposed the following goal:

Goal: Improve stormwater management practices throughout the County to reduce nonpoint source pollutant loads and achieve water quality standards.

This is to be achieved through the following **actions**:

- a) Develop additional data layers and input needed to model and assess the effectiveness of existing and future stormwater management practices in reducing nonpoint source pollutant loads.
- b) Complete and maintain an accurate database of all privately and publicly owned and maintained stormwater management facilities in the County.
- c) Conduct field monitoring to assess the effectiveness of current stormwater management practices. Report findings to the facility owner and the watershed

assessment and planning program for retrofit action recommendations, prioritization, and implementation.

- d) Evaluate alternatives for improving, enforcing, and funding long-term inspection and maintenance programs of both private and public stormwater management facilities.
- e) Work with the Departments of Inspections and Permits and Public Works to secure condition assessment data and maintenance schedules for all privately and publicly owned stormwater practices. Incorporate the data within the Watershed Management Tool to assess the effectiveness, prioritize retrofit actions, and develop retrofit implementation plans.
- f) Update standards and specifications for innovative stormwater management practices based on lessons learned from inspection, maintenance, and monitoring.
- g) Revise the County's Stormwater Practices and Procedures Manual to address new requirements of the State's 2007 Stormwater Management Act and to incorporate specific criteria for environmentally sensitive site design.
- h) Develop strategies to promote greater use of Green Buildings by developers as well as individual homeowners. Evaluate the Code to make sure that Green Building technologies are not impeded by existing code requirements.
- i) Provide incentives to promote the use of permeable paving surfaces
- j) Explore the possibility of increasing the requirement from 20% to 50% for treatment of impervious area on redevelopment sites.
- k) Develop design guidelines and specifications for the Regenerative Coastal Plain Outfall and Wetland Seepage system. Incorporate the information into the County's Stormwater Design Manual.
- l) Consider tax credits to encourage soft tidal edge erosion control techniques such as marsh planting.
- m) Explore the use of a stormwater utility fee on impervious surface areas.

LOOKING AHEAD

The AA County Department of Planning and Zoning has recently prepared a "background report" on water resources to be considered in developing Plan2040:

(<https://www.aacounty.org/departments/planning-and-zoning/long-range-planning/general-development-plan/plan2040-background-reports/reports/water-resources-report.pdf>).

It notes that the existing public sewer system is sized and was constructed based on the planned land use and zoning in the 2009 GDP. Upgrades to pipes and facilities will be required to accommodate new development in certain areas. It also lists the following key needs the County should focus on in Plan2040:

1. Complete ENR upgrades at Water Reclamation Facilities per Memorandum of Understanding agreement with MDE,
2. Determine the ability to increase treatment capacities at Water Reclamation Facilities using the "bubble permit" concept,
3. Develop a short and long-term strategic plan for implementing the recommendations from the OSDS Study to address problem septic areas. This will require feasibility and engineering studies, public outreach, potentially other planning studies, and funding strategies to implement the projects.
4. In conjunction with the above, apply for funding through the State's Chesapeake Bay Restoration Fund program to implement the OSDS strategies,

5. Develop a more streamlined petition process for community connections to public sewer.

6. Continue to model and assess the effect of various load reduction alternatives on non-point source pollutant loads and tributary assimilative capacities for all watersheds in the County,

7. Play an active role in regional planning efforts to optimize and most efficiently use regional water supplies.

**PROFILE OF A TRUSTEE
Mike Lofton**



Mike joined the Board of Trustees of CEPA in 2009, bringing a wealth of experience in environmental and local governmental matters. He is a Past President of the Harwood Civic Association and serves on the Board of the West & Rhode River Keeper. In

2013 he was elected founding Chair of the Growth Action Network of Anne Arundel County. He also founded and chairs the Anne Arundel Public Water Access Committee.

Previously, he was a Board Member of a number of organizations: Leadership Anne Arundel, where he was awarded their Community Trustee Award; United Way; Londontown Foundation, where he was Interim Executive Director; Junior Achievement, Scholarships for Scholars; and University of Maryland-Maryland Industrial Partnerships; and the Annapolis Economic Development Corp.

He has also served on numerous committees including the General Development Plan Steering Committee, School Maintenance & Renovation Taskforce, Taskforce on Year-Round Schools, Bob Neall Transition Team (Annapolis), and the Anne Arundel County Chamber of Commerce, where he is in their Hall of Fame.

He was Founding CEO of the Anne Arundel Economic Development Corporation, Deputy Secretary of the Maryland Department of Economic & Employment Development, and Executive Director of the Maryland Economic Development Association.

He received a B.A. in Economics from Transylvania University in Lexington, Ky. He attended the Economic Development Institute at the University of Oklahoma. He is certified as an Economic Developer, CEcD, by the International Economic Development Association.

He and his wife, Sherrie have lived in Harwood since the early 1970s. They raised two "wonderful" children, Daniel and Amanda. Sherrie is a regular substitute teacher in all the South County elementary schools. They are both devoted animal lovers with a current population of two dogs and one cat. Mike spends as much time on the water as possible, usually fishing on his Parker 21 center console. He also manages a few trips each year to fish and camp in the Everglades. Mike assures us the fish shown was a catch and release situation.

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