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The opinions of the authors of the articles in this newsletter are solely theirs and are not indicative of positions taken by the board of directors or officers of the Talbot River Protection Association  
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 **THE TALBOT RIVER PROTECTION ASSOCIATION**  
**NEWSLETTER**  
2009  
SPRING

**River Appreciation Group Report**  
by "Doc" Kuntz - TRPA Board Member and RAG Organizer



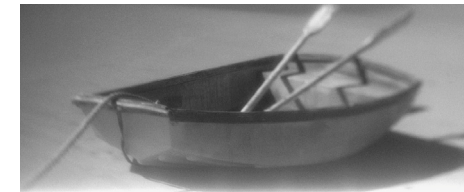
Easton Point Crew including city council members Moonyene Jackson-Amos, John Ford and Kelley Malone.

The River Appreciation Group (RAG) is planning a bigger and more fun day for RADPAD 2. There will be more informational displays, fun activities for kids, and water related activities than last year. We wanted to get a later start than last year, but time and tide wait for no one. We hope to have the litter pick-up boaters in the water by 9 AM. The official opening will be at 10 AM. Relay races will be around noon time. May 16 is RAD PAD! May 17 will be the rain date.

On April 4, RAG joined the Alliance for the Chesapeake Bay in their Project Clean Streams by undertaking shoreline cleaning along the upper Tred Avon River and some tributaries. Under the direction of Lee Ann Hutchison, a group of students from Easton High removed approximately 200 pounds of litter from a portion of Windmill Creek near Easton High School. Another RAG group, working under very difficult conditions on the hillside and

in heavy brush, removed nearly 1,000 pounds of litter from the shoreline of the old Easton Public Works facility and a stream near Easton Elementary School.

It was very gratifying that the town council president and two councilwomen actively assisted in the cleanup. Also, this participation by the Easton town council members gave them an appreciation of the conditions at the Public Works facility.



*Editors Note. The Public Works facility could be the site of a public park. It is important to let Easton Town leaders know that this is preferable to the construction of yet another development.*



Easton High School volunteers.

lots of free parking

# River Appreciation & Paddle Day

boat races • food • environmental exhibits • river clean-up • music

Saturday, May 16, 2009  
Easton Point Marina  
975 Port Street, Easton  
9AM

Enjoy a day of fun & learning on the Tred Avon River

bring your canoe or kayak to paddle, race, sell, or trade...  
OR rent one of ours!



For more info: Kathy at 410-822-1201 or eastonpointmarina@yahoo.com

You may have questions and or ideas about what TRPA is doing and we want to hear about your thoughts and opinions. Please submit a "Letter to the Editor" by written letter or e-mail. We plan to read your e-mails or letters and respond via the appropriate officer or committee chairperson. Representative e-mails or letters will be published in our newsletters. E-mails can be sent to info@talbotrivers.org. Letters can be sent to: Talbot River Protection Association Attn: Christine Sweeney, P.O. Box 2234, Easton, MD 21601

## Message from the President



The time since our last newsletter has been very busy for members of the TRPA Board. We have continued our mission of protecting the waterways of Talbot County by:

- Actively monitoring projects that could have an impact on the water.
- Becoming involved in regulatory and legislative actions as necessary.
- Supporting organizations whose missions are similar to ours.

Highlights of our activities are highlighted below:

- We evaluated a project to improve the waterline in a property along Leeds Creek. A request for public hearing was sent to the Maryland Department of the Environment. Mr. Mark Hill of Bailey Marine construction attended a meeting and explained the project. Based on his explanation, TRPA concluded that the project would improve the water and withdrew the request.

- We continue to follow and monitor:
  - The Bully Farms project
  - The Easton Village Pier project
  - Possible Agricultural Buffer Zone legislation and regulation.
  - County Bill 1162 – Comprehensive Zoning Plan Revisions.

- An additional Leeds Creek Project.
- Ms. Beth Jones of the Bay Hundred Fondation met with the Board to discuss the Saint Michaels - Miles Point Development project. She noted the scope had been reduced to lessen the impact on the water.

- Doc Kuntz continues to lead a group of volunteers actively participating in projects to clean our waterways. His update appears in this edition. It is very encouraging that three Easton Town Council members participated in the most recent effort.

- Active work is underway to prepare for our annual meeting. Ms. Christine Sweeney has prepared a flyer that is included in this edition. Please mark your calendar for this important meeting. It will be devoted to a discussion of

the Total Maximum Daily Load regulations to be issued for the Miles River Mainstream Shellfish Harvesting areas.

- Mr. Tim Junkin of the Choptank – Eastern Bay Riverkeeper organization continues to participate in TRPA. His report is contained in this edition. You can see the new Riverkeeper website at [www.crebconservancy.org](http://www.crebconservancy.org)

- Ms. Christine Sweeney continued her review of Easton Airport project and reports on it in this edition.

- We were fortunate to add new board members. Ms. Cleo Braver and Ms. Christine Sweeney were elected as full board members. They bring welcome additional talents to our endeavors. Mr. Tim Junkin was elected as a liason board member representing the Choptank Eastern Bay Riverkeeper organization.

- We participated in the River Network Meeting. This is a new organization dedicated to coordinating and supporting the activities of multiple water protection organizations.

- We continued to support the Creekwatchers organization by shepherding their budget request through the County budget process. Brice Gamber reports on their 10th anniversary in this edition.

- We have monitored the possible sale of a valuable waterfront property belonging to the Town of Easton. It housed the Public Works department and could be used to create a riverside park. This would be a better use for all of the public rather than selling it to a developer. We have named this the Easton Riverscape Project and are actively pursuing it.

- We supported the acquisition of grant funds for the Tanyard Creek Project. Our efforts were acknowledged in a recent news article.

- We participated in a Clean Water Network conference call.

- We have been asked by a resident to monitor the Royal Oak Development Project and are beginning to gather information on it and its possible impact on the Tred Avon river.

What Can I do to improve our waterways?

Do you ever ask yourself, “what can I do to improve our waterways”? The last article in this edition is a list of practical steps that can be taken. It is written by Cleo Braver one of our new board members.

As you can see our activities continue. We rely on the voluntary efforts of our board members for our continued success. We continue to need additional members to enable us to effectively perform our mission. If this is of interest please consider participation. Your efforts could contribute to the protection of our waterways for future generations. You can make a difference.

### TMDL's

You may want to know what a TMDL is. Our annual meeting will discuss this complicated subject at length. We look forward to seeing you there. A short summary follows:

Total Maximum Daily Loads (TMDL's) are a requirement, found in §303(d), of the federal Clean Water Act (CWA) that became law in 1972. The CWA requires that Maryland:

1. Establish Water Quality Standards (WQS) for its waters.
2. Monitor the conditions of its waters.
3. List waterbodies that do not meet WQSs with technology-based controls alone (303(d) list).
4. Set priority rankings for the waterbodies listed.
5. Establish TMDL's that meet WQS for each listed waterbody.
6. Solicit public comment.
7. Submit 303(d) list and TMDL's to EPA for approval.
8. Incorporate TMDL's into the State's Continuing Planning Process.

\* A TMDL (Total Maximum Daily Load) establishes the maximum amount of an impairing substance or stressor that a waterbody can assimilate and still meet WQSs and allocates that load among pollution contributors.

\* TMDL's are a tool for implementing State water quality standards. They are based on the relationship between pollution sources and in-stream water quality conditions.

\* A TMDL addresses a single pollutant or stressor for each waterbody.

*And finally, please note that as of May 21st, I will be on a three-month sabbatical Christine Sweeney has agreed to serve as our acting President.*

## Please Help TRPA Keep Our Rivers Clean

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, ZIP \_\_\_\_\_

Phone \_\_\_\_\_ E-mail \_\_\_\_\_

Amount Enclosed \_\_\_\_\_

I would like to become more active with TRPA.

Please contact me. \_\_\_\_\_

Annual individual or family membership can be any one of these levels:

Partnership - \$1,000.00 and over,

Sustaining - \$500.00 to \$999.99,

Participating - \$100.00 to \$499.00, or

Caring - \$25.00 to \$99.00.

Membership dues and donations are tax deductible.

TRPA is a 501(c)(3) corporation.

Mail to TRPA, PO Box 2234, Easton, MD 21601

Please encourage your friends and neighbors to become member of TRPA !

## CREEKWATCHERS Celebrate Their 10th Anniversary

By Brice Gamber – TRPA Liason and Creekwatchers President

As spring kicks off, so does the 10th anniversary of the Talbot organization. In 1999, a partnership of talbot river protection association, the Chesapeake bay foundation, and the Chesapeake bay maritime museum created the talbot creekwatchers program. The ten years of continuous operation is arguably the longest running creekwatchers volunteer organization devoted to water quality monitoring in Maryland.

The results of the 2008 monitoring effort are listed in the report that follows. The full report will be available on the TRPA web site. As many of you already know, monitoring encompasses data on water clarity, dissolved oxygen, nitrogen, and phosphorus as well as chlorophyll a and pH.

More recently, based on several negative indicators Creekwatchers began testing for bacterial pollution on Goldsborough creek off the miles. The environmental health sciences department at Salisbury university, under protocol established by MDE tested the samples. The results have recently been analyzed and raised continuing concerns as to the source of the bacteria pollution.

Separately, Creekwatchers and TRPA were asked by the talbot county department of public works to monitor the run off from their septic treatment plant on klondike road. The samples taken were also analyzed by the Salisbury university, and produced several incidents that raise concerns. Creekwatchers have recently met with public works and

shared these results and concerns with them. It is our hope that they will follow through on these problems by: 1) identifying the offending source from private land that is running into Goldsborough creek and 2) fix the problem at the septic processing plant that periodically creates a sharp spike in bacteria counts.

Creekwatchers will continue to partner with talbot county in testing for bacteria problems, and this year will be testing on leeds creeks at the request of public works.

We encourage all of the readers to continue to support the efforts of TRPA and Creekwatchers either through contributions or volunteering with Creekwatchers, where help is especially needed on broad, san domingo and edge creeks.



## LEAD's Update - April 2009

By Christine Sweeney – TRPA Board Member and LEAD Organizer

LEAD gives a big thanks to all the members of TRPA for its support and assistance over the years and now finds a group effort beneficial in accomplishing the goals of both organizations. The people guiding the activities of LEAD have joined forces with TRPA and will continue their efforts. TRPA is stepping up taking an active roll in keeping the residence of Talbot County informed about the activities and plans for growth of the airport.

The County Council & airport management continue to meet behind closed doors.

TRPA considers any significant plans to expand the airport a major threat to the environment & quality of life in Talbot County.

The URS Corporation continues its “interesting” relationship with Talbot County and similar airports throughout the country and the rest of the world.

The FAA stated the new safety zone off Route 50 can not be utilized as a starting takeoff area as previously reported.

The airport's Talbot County website “Alternative Analysis Final Report” addresses the trees which

obstruct the fly zone. These trees harbor our endangered Delmarva Fox Squirrel.

The Fletcher's Farm recently sold for the purposes of hunting and cannot be developed.

We encourage the hospital's growth and find the location adjacent to the airport a far better choice for employment opportunities than any extended runway that would only create more debt than jobs for the county.

LIMIT EXCESSIVE AIRPORT DEVELOPMENT  
info@leadeaston.com

## TALBOT RIVER PROTECTION ASSOCIATION RIVER FELLOWS - LANDOWNER ACTION PLAN

By Cleo Braver - TRPA Board Member

**The health of the Rivers of Talbot County** – the Miles, the Tred Avon, the Choptank and the Wye - has been monitored for years, but is not getting any better. The 2008 Chesapeake Bay Report Card released by the University of Maryland Center for Environmental Science gives Eastern Shore tributaries a grade of D. Nitrogen and phosphorus levels are high (nitrogen often higher than it should be by a factor of four) causing algae blooms and lowering dissolved oxygen which fish and shellfish require to survive. The sources of pollution to our rivers lie within our watershed. In other words, to quote Pogo, we have met the enemy and he is us. All of us in Talbot's River Watersheds – homeowners both on and off the water, row crop farmers, poultry growers, commercial enterprises – have a role to play in the River's undoing and it will take all of us to put things right.

The Talbot River Protection Association (“TRPA”) has assembled a list of actions which, taken collectively, we and scientists believe can make a very real difference in the health of the Miles River. We hope to encourage you – and fellow citizens in your watershed – to play an important role. You decide what changes you think you might be interested in implementing on your property or in your operations and the Miles River Fellows can steer you to the resources you need and track the collective effort. Commencing as early as 2009, a dedicated “River Fellow” at Horn Point's marine science graduate program will perform research on the Miles and thereafter on its sister Rivers, contribute to the more precise identification of pollution sources and appropriate solutions, and provide the feedback we need to know our efforts can make the difference. As Margaret Mead has said: “Never doubt that a small group of committed citizens can change the world. Indeed it is the only thing that ever has.”  
River Fellow Landowner Actions

*1. Transition some of your lawn to native trees and shrubs.*

Why: Eliminating lawns eliminates mowing; reduces or eliminates watering and lowers water bills; provides habitat and food for birds, bees and other insects and greater biodiversity; eliminates fertilizers, pesticides

and herbicides which make their way into the Miles River.

How: Take advantage of free assistance of Master Gardeners' Bay-Wise Landscape Management Program of Maryland Cooperative Extension Service. Get a copy of the EPA's “Better Backyard” published under the Chesapeake Bay Program for extensive tips. Check out Adkins Arboretum's plantings, library, and plants for sale.

*2. Practice integrated pest management (IPM) by, e.g., using native plants with natural pesticide qualities to minimize or eliminate the need for pesticides and by using beneficial insects like lady bugs and by “spot” or “band” treating with safer non-toxins like insecticidal soap.*

Why: Eighty million pounds of pesticides are used annually in the US, EPA has found at least one pesticide in almost every water and fish sample from streams and in more than half of all shallow wells. Pesticides kill beneficial insects including pollinators and accumulates in the food chain of humans.

How: Use native plants with natural pesticidal properties. For example, apply natural pesticides like pepper or garlic or grow basil to control aphids.

*3. Eliminate fertilizer on lawns and, in gardens, transition nitrogen and phosphorus based fertilizers from synthetic fossil fuel based to organic.*

Why: reduces nitrogen and phosphorus runoff which leads to algae blooms, lowers dissolved oxygen and kills fish.

*4. If you grow crops on your property, install buffers (100 feet is currently funded in Maryland) around your fields, take advantage of existing CREP, CRP and other federal programs, and share these funds with your farmer-operator. If you are ready to take a further step, consider allocating some of your farmland to sustainable vegetable and small animal production.*

Why: buffers of warm season grass mixes or native trees and shrubs filter sediment (up to 5 tons an acre) and take up nutrients nitrogen and phosphorus which would run off into River, particularly phosphorus for which agriculture

contributes significantly; absorb carbon (which causes global warming); provide oxygen; and provide habitat for disappearing Eastern Shore species like the quail. A 50 or 60 foot minimum buffer is advised.

How: Chesapeake Wildlife Heritage will design, install and help you maintain your buffers and provide feedback on improved bird species in your new habitat.

*5. If you have annual row crops on your property, plant or ask your operator to plant a winter cover crop (like winter wheat or crimson clover and barley), taking advantage of existing federal and state programs.*

Why: Cover crops retain soil and take up nutrients nitrogen and phosphorus (particularly nitrogen for which agriculture accounts for up to 90%) which would otherwise run off into River.

How: Ask your farm operator to plant the cover crop or have a service fly it in even before the summer crop is harvested. Sign up starts around June.

*6. Beyond buffers and cover crops, landowners with row crops can incorporate or have their operator incorporate additional sound environmental practices like knife injection of fertilizers, band spraying of herbicides (which can reduce herbicide volumes by two thirds), and application of poultry manure only where poultry feed practices are modified to reduce phosphorus.*

*7. Install buffers along drainage ditches.*

Why: Drainage ditches, which surround all fields and roadways, carry sediment and nutrients to the Bay. Buffering riparian edges alone does not address this problem.

Why: Buffers such as warm season grass mixes and native tree and shrub mixes provide habitat for disappearing Eastern Shore species like the quail; filter sediment, nitrogen and phosphorus which would run off into River; absorb carbon and provide oxygen. A fifty or sixty foot minimum buffer is advised.

How: Contact the non-profit Chesapeake Wildlife Heritage to design, install and help you manage these buffer strips.

*8. If you have a septic system, install a denitrifying treatment unit. These can reduce nutrient discharges to both surface water and ground water. This upgrade is available in Talbot County through the Bay Restoration*

# Choptank and Eastern Bay Conservancy Riverkeeper Report

By Timothy D. Junkin, Esq. TRPA Board Liaison and Choptank Riverkeeper Executive Director

Dear TRPA Members:

Let me thank TRPA for its support and for the opportunity to disseminate this letter. I write about an ongoing effort to build a new non-profit environmental organization with the following mission: to help restore and protect the Choptank River and its tributaries, and Eastern Bay, the Miles and Wye Rivers, through community education and outreach, clean water advocacy, restoration programs, water quality monitoring, and the strengthening and enforcement of anti-pollution laws. The organization initially intends to employ a full-time advocate designated as the Choptank RIVERKEEPER®, and hopes over time to build the capacity to employ others including a second full-time RIVERKEEPER for the Miles, Wye, and Eastern Bay.

The Baltimore Sun recently described the Choptank as the second most polluted river in the state. Monitoring by Talbot Creekwatchers, University of Maryland Horn Point scientists, and others, demonstrate over the past two decades an alarming increase in nitrogen, phosphorous, fecal coliform, and sediment pollution, leading to a dangerous decrease in water quality and oxygen levels in all our rivers. The need to reverse this trend is vital to the beauty of this land, to the quality of life on the Eastern Shore, and to the very health of ourselves and our children.

Although TRPA and others have done vitally important work on behalf of our rivers, until now our community has lacked an organization with full time advocates dedicated solely to protecting our rivers. The Choptank River Eastern Bay Conservancy (CREB) has applied for IRS approval as a tax-exempt organization. It has been offered important start-up financial support by the Town Creek Foundation and the Campbell Foundation. It has been accepted as a member of the WATERKEEPER Alliance® which now comprises more than 115 RIVERKEEPERS nationwide and 16 on the Chesapeake Bay, and is able to provide scientific, administrative, and legal support. River by river, working on local priorities and collectively tackling legislative, regulatory, and legal issues, Chesapeake RIVERKEEPERS are becoming a force in the effort to restore a degrading Bay.

Programs under consideration by CREB include coordinating on a website the water monitoring efforts of a variety of important groups and providing the community with up-to-date water quality assessments and practical pollution-reduction solutions; assisting in oyster restoration efforts; promoting shoreline restoration and clean up; encouraging better septic and wastewater practices; patrolling watersheds by water and air, and investigating and, where appropriate, interceding in illegal storm water runoff, concentrated animal waste runoff, critical area and pollution violations of any kind, and developing volunteer community programs to address all of these issues. Moreover, notwithstanding that we live in a community where agriculture predominates, is of great intrinsic value, and must be preserved, agricultural pollution is a major contributor to the contamination of our rivers and innovative and collective solutions to this problem must be found.

An organization such as CREB is vital to advocate for and protect our local waterways in a world of competing interests. Currently CREB is seeking to build a strong Board of Directors, comprising local scientists, environmentalists and business leaders. We will only be successful, however, if we can earn the support of our community. We will need a broad and committed membership, financial support, and volunteers. We hope to draw on the expertise and support of TRPA to accomplish this. Membership development, website and newsletter development, project coordination, and administrative support are all essential priorities. We are currently seeking members willing to sign on in support of the organization and volunteers willing to offer assistance. If any of you are willing to become a member, or to offer your time or expertise in support of this organization, please contact me at [tjunkin@comcast.net](mailto:tjunkin@comcast.net). You can see us on the web at [www.crebconservancy.org](http://www.crebconservancy.org)

*Fund at no cost (installation and five years of maintenance) for properties within 1,000 feet of the water. A 2009 Maryland law requires it for new homes within 1,000 feet.*

Why: Increases removal of nitrogen to which wastewater contributes greatly.

How: Contact Talbot County Public Works Engineer Ray Clarke

*9.If you have waterfront property, leave marsh grasses and natural vegetation in place, and install grasses and natural plantings for protection against shoreline erosion. Hardscaping like rip-rap, bulkheads and jetties are expensive, require permits, and block habitat in the critical area of the water's edge.*

Why: Protecting your shoreline against erosion with natural plantings rather than hard protection like rip-rap provides needed habitat for turtles and many species. A 2008 Maryland law requires natural plantings in many instances.

*10.If you have waterfront property and appropriate water characteristics, install floating oyster tanks. Talbot County's "oyster gardener" program will work with you or you can get their instructions for making your own Taylor Float.*

Why: Oysters – if they can survive – will filter the water in the immediate vicinity. You can contribute to the restoration of the local oyster population or you can grow about 500 oysters to market size.

How: Contact Talbot County Sanitary District Engineer Bill Wolinski.

*11.If you have waterfront property, install an aerator in the water.*

Why: Dissolved oxygen levels in many parts of the Miles River are too low for fish and shellfish to survive. An aerator will increase dissolved oxygen levels and create small areas where fish will gather to breathe, particularly between dusk and dawn when dissolved oxygen levels are lowest.

How: Contact Talbot County Public Works Sanitary District Engineer Bill Wolinski.

*12. Plant native trees on your property. On the smallest of properties, trees can lower home energy bills (plant deciduous trees on the south side of a home to provide shade in summer and light in winter). If you have waterfront property, install 100-150 foot riparian buffers along the water's edge with native trees and shrubs, taking advantage of existing federal programs which pay you to do so.*

Why: A riparian buffer along the water's edge of native tree and shrub mixes moderates temperatures, provides habitat, filters sediment and nutrients; absorbs carbon and other pollutants from the air.

How: Check out Chesapeake Wildlife Heritage, which will plant and manage buffers on private as well as public lands.

*13.If you have them on your property, protect woodlands, wetlands and meadows. If you don't, install a wetland, woodland, or a meadow, taking advantage of existing federal programs, which pay you to do so.*

Why: These three critical ecosystems promote good air quality by filtering pollutants and sequestering carbon, moderate temperatures, filter water, conserve soil, reduce flooding, and provide habitat and food; meadows and wetlands provide critical habitat and food and can lead to the resurgence of disappearing species.

How: Check out Chesapeake Wildlife Heritage, which has created over 5,000 acres of wetlands, grasslands and woodlands.

*14.Protect your property by placing restrictive easements on your property. Easements can both protect your property against development and, going further, ensure that the use to which you put portions of your property – woodland, wetland, meadow – are continued.*

How: Contact Eastern Shore Land Conservancy about both types of easements.

*15.Manage water resources by reducing water demand (transition to native plantings, resist the urge to water lawns, grow crops that require less water), and by increasing water productivity.*

Why: Currently, U.S. gardens and lawns use 8 billion gallons a day of water, of which 32% is due to lawn care. Total flow volumes overwhelm treatment plants and result in outflow to the River. (e.g., it takes only 1/8 inch of rainfall to overwhelm NYC's wastewater treatment plants – Riverkeepers).

Why: A home can cut summer water use by as much as 2/3 by landscaping and watering with water conservation as a goal.

*16.Use water sources currently not utilized and lessen storm-water runoff going to the Miles River via the St. Michaels wastewater treatment plant (which is within the Miles River watershed) or via drainage*

*ditches, by installing rain barrels (which can capture 36,000 gallons off a 2,000 square foot home), planting a rain garden, and using permeable pavers. Investigate the possibility of installing a gray water system, which will reclaim your used water for irrigation and other non-potable uses.*

How: See the rain garden installed at the Talbot Ag Center by the Talbot Master Gardeners and contact the 74 volunteers of Talbot Master Gardeners.

*17.Refrain from flushing medicines and other toxic substances like solvents, paints and preservatives that make their way to the Miles River via the wastewater treatment plant, your septic system, or drainage ditches.*

Why: Over 300 synthetic chemicals have been found in our bodies. Medicines of all kinds have been found in our waterways.

*18.Consider the impact your food choices can make on the land. Buying local and organic (or sustainably grown) foods grown in healthy soils, meats and poultry that are pasture raised and not corn fed, and eating lower on the food chain are as good for Talbot's Rivers and the environment as they are for you.*

Why: Vegetables and grains require a vastly smaller percentage of water, land and fuel to produce than meat. For example, it takes 25 gallons of water to produce a pound of wheat but 5,214 for a pound of beef; it takes a gallon of fossil fuel to produce a calorie of protein from soybeans but 54 gallons for a calorie from beef; it takes 12-16 pounds of grain to create one pound of beef; and 70% of U.S. grains and cereals and even 50% of the world's fish catch is fed to livestock (John Robbins, The Food Revolution).

Why: The nutrition in meat and eggs is higher if the animal or layer eats grass instead of grain – e.g., eggs of free-range chickens have more omega 3 fatty acids, vitamin E and less cholesterol than factory-farmed.

*19.If you can, make a contribution to help support a Horn Point River*

*Fellow, or make a contribution to or engage the services of a non-profit mission-driven organization described in this list.*

*20. Help to get the neighbors in your Watershed involved.*

***If you or someone you know is interested implementing one of these measures and becoming a River Fellow, contact TRPA Board member Cleo Braver at 410-763-8385 or [cleobraver@aol.com](mailto:cleobraver@aol.com). (April 2009) ©2008***

# TALBOT River Protection ASSOCIATION

## ANNUAL MEETING

**T M D L** "Total Maximum Daily Loads"  
**MAY 20th, 2009 6pm to 8pm**  
**Talbot County Historical Society**  
**17 South Washington Street, Easton, Md**

The principal topic will be  
**Total Maximum Daily  
 Loads (TMDL's).**

TMDL's are about  
 to be assigned to  
 Talbot County  
 waterways.

They will have impact on  
 the land use and discharges into our waters.

Discussions regarding TMDL's, what they are  
 and what their expected impact will be.

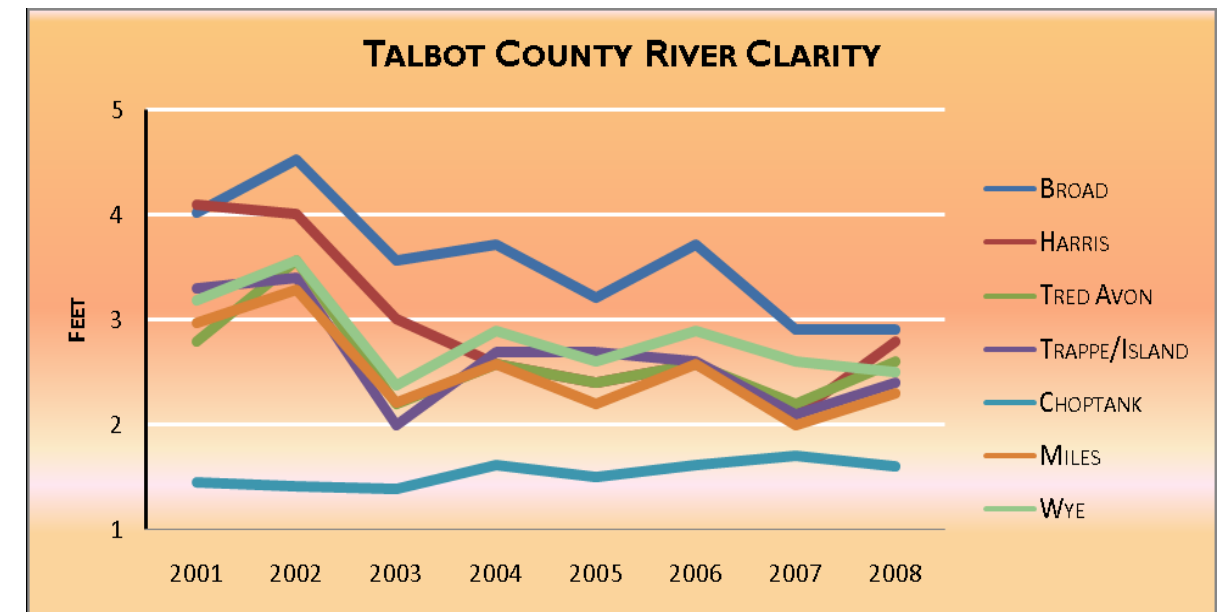
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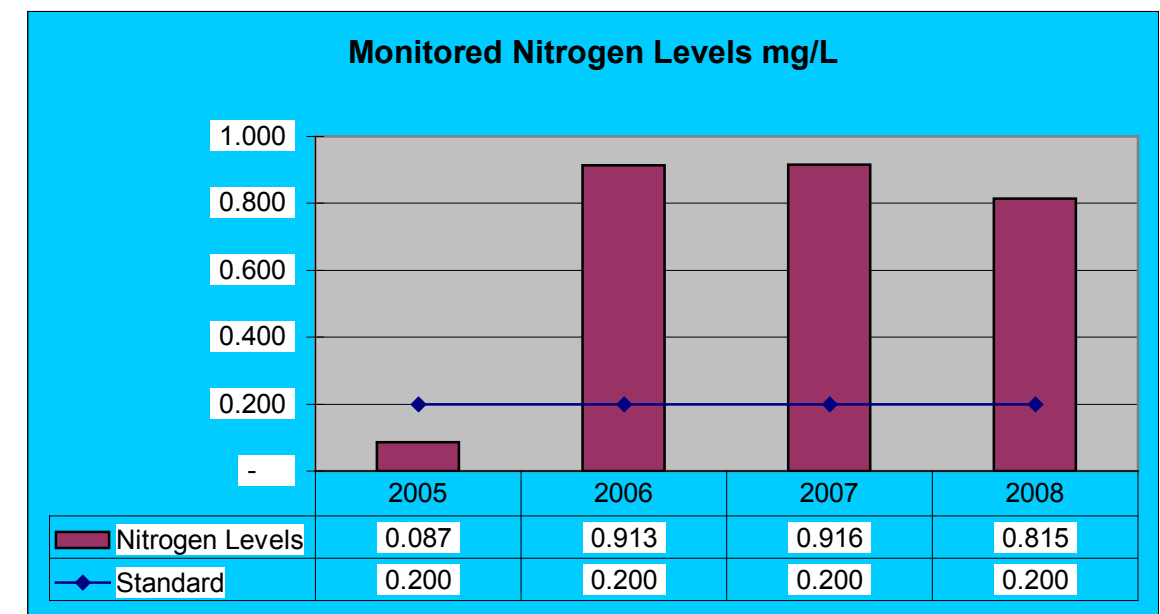
### TALBOT COUNTY CREEKWATCHERS WATER QUALITY MONITORING REPORT 2008

#### Key Findings

- **Water Clarity:** Better than 2007 but continues to fall short of the healthy standard of 36 inches. Water clarity is the most obvious and easily monitored indicator of overall water quality. Water clarity showed an overall decline. When Talbot Creekwatchers started taking data in 1999 over 70% of all measurements met the standard of greater than 3 feet clarity. This year, 14% of measurements met the standard.

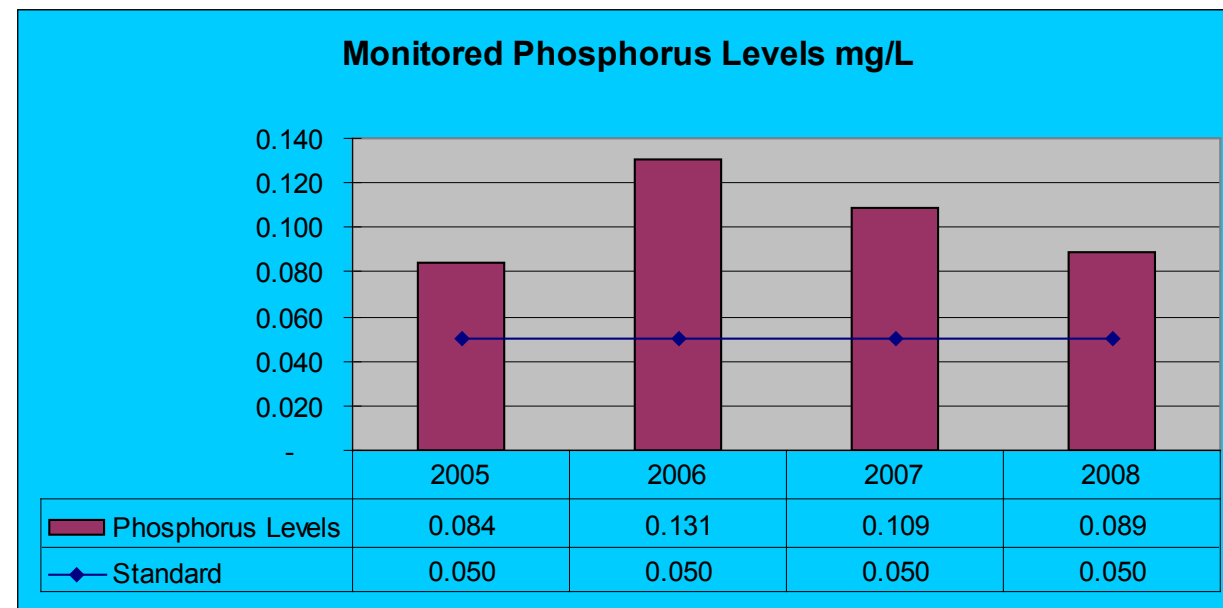


- **Nitrogen Pollution:** Decreasing but remains greater than 4 times the standard.



Nitrogen levels in the Choptank River were extraordinarily high again this year averaging 2.643mg/L in April and 2.235mg/L in May. By October the nitrogen level in the Choptank River was within the average range for all the Talbot tributaries. A major part of the Choptank problem occurs each year in the spring months.

- **Phosphorus Pollution:** Improved from 2006 and 2007 but continues to be unsatisfactory at almost double the Talbot Creekwatchers standard.



- **Oxygen Levels:** Substantial periods of inadequate oxygen were again common in most tributaries.

Talbot Creekwatchers standard is >5.0mg/L. Of The 610 individual measurements made over the 8 tributaries only 71% achieved the minimum level of oxygen needed to support the fish.

\* **Water Quality:** Poorer in the upper reaches of Talbot County waterways. As we have observed every year since the program started, water quality measurements taken near the headwaters of Talbot County tributaries are worse than those collected at or near their mouths. The notable exception is oxygen in the Miles River, which decreased by 11% as the river flows to the mouth.

- **Submerged Aquatic Vegetation (SAV):** Noticeable improvement at select northern sites. Wye River, Broad Creek and Harris Creek reported numerous observations of sparse growth. Submerged aquatic vegetation is vital to the health of the Bay as it provides habitat

for juvenile fish and crabs, reduces erosion along shorelines, is a source of nutrition for many aquatic creatures and generates oxygen. Since this vegetation is sensitive to pollution and sediments, its presence is often considered the single best indication of overall water quality.

- **Chlorophyll a:** The average level in all tributaries was similar to what has been seen in recent years. Chlorophyll a is usually a good indicator of excessive algae. This year volunteers recorded periods of excessively high levels at several locations. The Wye River, again this year had the highest levels of chlorophyll a. Island Creek and the Miles River also had high readings. All of these observations at each of the tributary's headwaters.
- **pH Measurements:** A marked negative change occurred across all tributaries. pH levels are directly related to the health of fish and aquatic plant populations. The most common cause of high pH readings is the decomposition of algae. In Island Creek and LaTrappe Creek many of the measurements were above the maximum 8.5 in July and August. From 2007 to 2008 the average dropped from 94% to 87% healthy.

#### Parameters

Analysis conducted for this report was performed on data collected between April and October 2008. Previously collected data by Talbot Creekwatchers from 1999 through 2007 was used to provide perspective over time.

#### Clarity

Water clarity is determined by measuring turbidity. Turbidity is the ability of light to pass through water. Poor water clarity indicates the water is not clear enough to support the growth of underwater grass populations. The healthy range for water clarity is greater than three feet.

Water Clarity in Talbot County's tributaries ha declined dramatically since Talbot Creekwatchers started collecting data in 1999. At that time, over 70% of all measurements indicated healthy turbidity levels; nine years later in 2008 only 14% of all measurements were in the healthy range. During this period, the overall average water clarity depth dropped from a healthy 3.7 feet in 1999 to an unhealthy 2.4 feet in 2008. This average depth was improved by unusually high readings in April 7.5 feet in the Tred Avon River and Island Creek and 6.5 feet in Harris Creek.