



The Queen Anne's Chronicle

CELEBRATING QUEEN ANNE'S COUNTY

INFORMING THE CITIZENS

QAC's LIBRARIES – BOOKS AND SO MUCH MORE

By MARY CAMPBELL

Do you know that, in addition to lending books and periodicals, the Queen Anne's County Free Libraries are the go-to place for:

- Detailed repair information specific to your car,
- Access to over 1000 history reference books,
- Individualized homework help,
- Back copies of local papers,
- Legal help with a divorce, name change, or child custody issue,
- Help with using your Kindle, Nook, or iPad,
- Meeting animals visiting from the Baltimore zoo,
- Access to your email, and
- A model Bay-friendly rain garden?

Here in Queen Anne's County, our Centreville and Stevensville libraries, while they have up-to-date and comprehensive book collections, are much more than just good places to go to borrow a book.

Access to Information

Our librarians have taken seriously the main mission of a library -- to provide access to information -- and they have responded effectively to the ongoing revolution in information technology. Our two libraries still circulate books and periodicals, as was done 103 years ago when the QAC library was

established. But today they also maintain a website at <http://www.quan.lib.md.us> that is a library in itself, and they provide information from internet, audio, and video sources.

Very much part of the mix is that still ever important in-person, face-to-face transfer of information. That occurs both through the personal assistance the librarians provide



Queen Anne's County preschoolers, Cordae Turner, left, and Ava Jacobi, right, hone their computer skills in the Children's Room of the Centreville Library. — Chronicle Photo

to individual members of the public and through citizens' use of the libraries' popular meeting rooms.

Today, besides the books and periodicals, videos and audios, there are all those computers,

including a couple in the children's room. While those colorful and well-used machines are filled with preschool activities and games, the computers in the main room store a load of helpful information, including extensive data bases on a wide variety of subjects.

Rather than search for information via Google, it is often quicker and more reliable to access one of the many carefully compiled data bases that the library subscribes to and makes available. These data bases provide, for example, auto repair info, standardized tests with practice tests, foreign languages, magazines, literature, science, and much more. And with your library card number, you can access these data bases from home, school, or wherever.

For those who would like some extra help with their computer skills, the QAC libraries have started providing computer classes for adults (see box on page 2). Computer classes are offered at both libraries. They are so popular that it is best to ask the librarians to put you on the list for the next round of classes. Outside of the more formal instruction in these classes, computer assistance is readily provided if needed.

Taking on eBooks

What about eBooks and eReaders? Here

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PHASE II WIP APPLIED TO QUEEN ANNE'S – OUCH?

As we began to see press accounts and internet buzz about "draft Phase II WIP's" being prepared, and "final Phase II WIP's" being due at the end of March, we realized that not only had we obviously missed Phase I, whatever that was, but more seriously that we really didn't even know what a WIP was -- other than it had something to do with cleaning up the Bay.

Believing that Bay restoration is very important, and suspecting that there might be at least a few other folks equally unclear about WIP's, the *Chronicle* decided to investigate.

Of WIP's and TMDL's

Our research and interviews quickly taught us that a **WIP is a "watershed improvement plan"**, and that these plans, for all the major river basins in the Chesapeake Bay watershed, are a central feature of the renewed Bay clean-up effort that began in earnest, under newly-asserted federal leadership, in 2009.

That made us want to understand what happened in 2009, why the feds stepped in, and what the new strategy was. So we looked into the history of Bay clean-up efforts, and what we learned appears on page 8 of this issue in:

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Non-Profit Org
US Postage
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Baltimore, MD
Permit #1

QUEEN ANNE'S COUNTY FREE LIBRARY 2011

Total Collection

Books 105,273 Audio 10,342
Video/DVD/Blu-ray 14,821

Circulation Statistics

Books (Adult) 121,753
Books (Children's) 95,312
Audio Recordings 27,196
Periodicals 2,071
Video/DVD/Blu-ray 145,141
Inter-Library Loan 5,253

Activity Levels

Registered Card Holders 32,657
Reference Questions 16,874
Reader Advisory Questions 14,460
Patron Computer Sessions 22,098
Meeting Room Bookings 966
Children's Program Attendance 7,027

QAC's Libraries, continued from Page 1

again, the QAC libraries are meeting the changing world. Althea Stubbs, who has been at the QAC library for 35 years, says it well: "Basically, we are doing the same things, but we are doing them differently." Now, if you call and make an appointment, a librarian will show you how to use your eReader and acquaint you with Overdrive, the Maryland Digital Library Consortium, through which you can download eBooks at the library or, after instruction, at home or school.

The current tech wrinkle, which libraries are developing strategies to deal with, is that Amazon and a number of other publishers won't sell eBooks to libraries, so the libraries cannot provide all the titles they would like to. In the meantime, our librarians remind us that the cost of buying eBooks can mount up, and real books — as well as library-provided eBooks -- are free at the library.

Special Places for Adults and Children

When the subject of our County libraries comes up (Full Disclosure: I'm on the Library Board, see below, so I'm very interested in citizens' opinions of our libraries), what I always hear is how helpful and knowledgeable the staff is; how comfortable the library feels with its warm, small-town friendliness; and how many wonderful resources it makes available to the public. Personal attention, individualized help — that seems to be the hallmark of our libraries: "Why the librarians even know my favorite author and lead me to her most recent novel when I come in!"

It's the same for youngsters. The children's librarians know many of the children and their preferences. Through their popular programs, *Mother Goose on the Loose*, *Storytime on Wheels*,

Read to Rover, *Legos*, other special programs, or just helping a child to find a suitable book, the children's staff gets to know QAC's children. Then, too, they provide the very young with a head start in computer literacy on the Children's Room's computers.

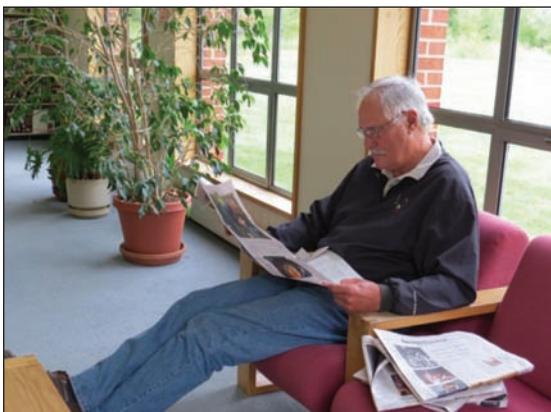
In many ways, our libraries are our community centers. Librarians help citizens with job applications and Section 8 housing forms. Tutors use the library to work with students. Folks get to know each other and share their thoughts during book discussions. Scout meetings, candidate forums, free family law assistance offered through the Circuit Court, and numerous other local organizations use the libraries' Meeting Rooms, which are booked nearly 1,000 times a year!

Who Runs the Libraries?

The Queen Anne's County Free Library is organized as a nonprofit with a twelve member board of trustees, made up of County residents interested in supporting our libraries' mission. A trustee is elected by the board to a three year term and may serve no more than two consecutive terms. The Library is supported mainly by state and county government funds as well as through an annual giving campaign, fines, grants, and other resources.

The libraries are staffed by 35 full and part-time employees. They comprise a healthy mix of experienced librarians, who have been there over 20 years, and an equal number of young staff who bring lots of energy, enthusiasm, and technical knowledge. Chuck Powers, the Library Administrator, is retiring this July after 38 ½ years in that position; his successor will be appointed by the board of trustees. Kim Baklarz is the Assistant Library Administrator and Head of the Centreville Branch, and Peggy Ransom is Head of the Kent Island Branch in Stevensville.

If you haven't experienced or taken full advantage of our libraries yet, you should. They are certainly an important part of what makes Queen Anne's County "a great place to live"!



Patron of the Kent Island Library takes advantage of the library's selection of newspapers. — Chronicle photo

LIBRARY PROGRAMS

ADULT:

Book Groups

Check with librarians for information

Computer Classes

Computer Basics
Microsoft Word/Excel
Introduction to the Internet
Email, Open Questions
Call for times and to sign up.

Family Law Assistance

Divorce, Custody, Visitation,
Name Change, Child Support
Free legal consultation
through QAC Circuit Court.

Thursdays, 5:30 p.m.

-Kent Island, 1st & 2nd weeks
of month
-Centreville, 3rd & 4th weeks
of month

CHILDREN'S:

(Summer)

Story Times

(birth to age 5 with caregiver)

-Kent Island — Thursdays,
10:15 and 11:00, June 14 to
July 19
-Centreville — Wednesdays,
10:30, June 13 to July 25

Miss Mary Magpie

(pre-K through 2nd grade)

Stories from near and far.

-Kent Island — Monday, June
18 at 6:30

"Rumpled"

Full production by the Single
Carrot Theatre, based on
Rumpelstiltskin. Music,
costumes, humor, character
issues, audience participation.

-Centreville — Tuesday, June 26
at 10:30

-Kent Island — Tuesday, June
26 at 2:00

Night Shift (ages 6-12 years)

Baltimore Zoomobile: Meet zoo
creatures of the night, learn about
their (and your!) special senses.
-Kent Island — Tuesday, July 10
at 11:00

-Centreville — Tuesday, July 10
at 2:15

Tracey Eldridge

(ages 2-7 with adult)

Participation in singing,
puppets, dramatic play.

-Centreville — Monday, July 23
at 10:30
-Kent Island — Monday, July 23
at 2:00

PLANNING COMMISSION

In the first ten days of February each year, citizens may submit proposals, known as "text amendments" (TAs), to change parts of the County zoning law. The Planning Commission (PC) makes a recommendation on each proposed TA to the County Commissioners, who are responsible for final action on the proposals.

At their **March** and **April 2012** meetings, the PC considered both citizen-proposed and PC-developed TAs, as follows:

- TA 12-02 allows age restricted housing in any zoning district allowing institutional residential housing and provides increased density under certain conditions for apartments which are age-restricted, moderately priced, or workforce housing. PC recommended (Chairman Waterman recusing) approval, but omitting the expansion of "Institutional Residential Uses" to include age-restricted housing.
- TA 12-03 expands the area which may be used for residential apartments at marinas in the Waterfront Village Center (Kent Narrows) and increases the allowed building height. PC recommended approval, minus the provision that would have allowed buildings of 55 feet without a bonus determination.

- TA-12-04 expands the definition of "Bed and Breakfast" to allow weddings as an accessory residential use. PC gave an unfavorable recommendation.
- TA 12-09 eliminates the requirement for planted buffers to screen agricultural property and public roads from development parcels in certain subdivisions. With the agreement of the petitioner, PC will request an extension of time to consider this issue.
- TA 12-10 adds aquaculture to the permitted activities, and reduces the setbacks from public and private roads, for minor extractions in the Village Center district. PC recommended approval.
- TA12-11 removes the 65,000 square foot limit on any single retail store in the Urban Commercial, Suburban Industrial, and Town Center zoning districts. PC recommended approval with an amendment to omit the Suburban Industrial district from the areas which may develop large ("big box") retail spaces.

PC granted an amendment to an approved site plan to allow the phased construction of three mixed-use buildings on Shamrock Road in Chester. Extensions were granted for a site plan to expand the Holiday Inn Express and for a subdivision plan to develop Osprey Pointe. PC endorsed the County's request for recertification of the MALPF program and postponed until its May meeting a consideration of possible updates to its rules.

KEEP THE HONEY BEE HEALTHY

By DAVID SMITH

The honey bee, *apis mellifera*, came to North America in the early 1600's with the first colonists and was soon known to Native Americans as "The White Man's Fly." The settlers later took colonies of bees westward: by the early 19th century they had reached the mid-west. In 1857, colonies of bees were taken to San Francisco by ship and land where they were sold for the handsome price of \$100 gold.

Why this long-standing fascination and involvement with honey bees, and why are so many people engaged today with beekeeping?



A beekeeper installs a colony of bees in their new home near Centreville.
— Chronicle Photo

The Importance of Honey Bees

It is principally for pollination of the blooming flowers of food crops that we look to the honey bee. The agricultural industry depends on the honey bee for the pollination of about 300 diverse crops such as blueberries, strawberries, cranberries, apples, pears, oranges, watermelons, cucumbers, squash, broccoli, onions, cantaloupes, and many, many more. It has been said that without the honey bee, the world's population would not have enough food to sustain life.

The California almond crop is a stand-out example of the importance of pollination by bees. Every spring half of all the managed colonies of honey bees in the United States are trucked to California for the purpose of pollinating the almond crop. California has over 700,000 acres of land devoted to almond production; two colonies per acre are needed to ensure adequate pollination. The almond growers pay around \$100 for each colony, an investment totaling about \$150 million annually to ensure a prime product for market.

New York's apple crop requires about 30,000 hives; Maine's blueberry crop uses about 50,000 hives each year.

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NUTRIENT TRADING: HOW FARMS CAN PROFIT BY HELPING WITH THE BAY CLEAN-UP EFFORT

By DANA YORK

Under the Bay's "pollution diet", each sector, urban and agriculture, has its Total Maximum Daily Load (TMDL) baselines to meet. Once those baselines are met, when additional growth causes additional pollution, then new "best management practices" (BMP's) must be deployed to stay within the TMDL baselines.

The emerging practice of "nutrient trading" allows a sector needing additional BMP's to purchase temporary offsets ("credits") from a sector where TMDL baselines are being exceeded. This trade provides the purchasing sector with a short-term "bridge loan" until it can marshal the resources to acquire the new BMP's and keep within its TMDL baseline.

Question and Answer

Question: Which sector, urban or agriculture, will be the purchaser, and which the seller, of credits?

Answer: Agriculture will be the seller, urban the purchaser. There are several reasons why the trades will go in that direction.

- Farming areas are able reduce pollution loads to the Bay far more cheaply than urbanized areas. Agriculture is the low-cost producer of the BMP's that will clean up the Bay. Urban BMP's (like wastewater treatment plant upgrades) are far more costly to finance and the bridge loans will be welcome.
- The Bay region is rapidly urbanizing, with population density in Maryland already the 5th highest of all the

states. The ever-growing urban sector is going to face the need to make continuing investments in additional BMP's, unlike the more stable agricultural sector.

- Over the last 15 years, federal, state, and local programs have assisted agriculture to install a range of pollution-reducing BMP's, like buffers, cover crops, and many more. Innovative farmers have taken advantage of these programs and are now in a position where they not only are meeting their baseline TMDL requirements, but are generating over-and-above credits that can be sold to assist in the financing of expensive urban retrofits.



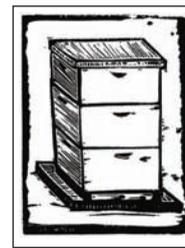
Cover crops – rye, wheat, barley – planted in Maryland in 2011 exceeded the 2013 pollution reduction milestone for cover crops by 21 percent.
— Chesapeake Bay Program

Nutrient Trading in Maryland

The Maryland Department of Agriculture and the Maryland Department of the Environment have agreed to allow nutrient trading between sectors, all under tight scrutiny and regulations. This allows everyone to be a winner:

- The urban sector can continue to grow and implement expensive urban BMP's over time;
- The agriculture sector can receive annual payments of private money for BMP's that they can generate at a cost well below what the urban sector is willing to pay; and
- Taxpayers don't have to pony up additional tax money. Back scratching at its best! And the ultimate winner is the

SPEAKING OF HONEY...



Beehive

— Courtesy John O'Neill

After reading *Keeping the Honey Bee Healthy*, you may be interested in some important aspects of honey itself:

- Domestic honey production has decreased almost 20% over the past 30 years, and almost 10% in just the past ten years. The number of retiring beekeepers is greater than the number of younger individuals coming into the business. In sharp contrast, honey consumption in the U.S. has almost doubled in the past 30 years!

- Unlike sugar, which is sucrose and recommended by many to be avoided in one's diet, honey is primarily fructose and glucose and does not require digestion. Bees gather nectar (sucrose) from blooms, then add the enzyme invertase that converts the sucrose to fructose and glucose.

- "Commercial" honey is not the same as "local" honey. About 60% of the honey in the US is imported -- from countries such as Vietnam, Argentina, China, Brazil, Mexico and Canada. Commercial honey is mixed, heated, and filtered, changing its characteristics significantly. In contrast, honey from a local beekeeper has not been processed and is representative of the area's nectar producing plants.

- Local honey contains pollen grains that, for many allergy sufferers, have the beneficial effect of reducing or eliminating their reactions.

- Here are some of the things contained in honey: B vitamins, calcium, copper, iron, magnesium and manganese. Honey is also a great antioxidant and has been used as a medicine for centuries. Use your computer to search "honey vitamins minerals" for more information about honey's nutritional values.

— DAVID SMITH

Bay and all of us who live, work and play in the Bay watershed.

To participate in the nutrient trading, agricultural landowners must utilize the web-based Maryland Nutrient Trading Tool to calculate baseline eligibility and credit potential. Once credits have been certified and approved by the Maryland Department of Agriculture, they can be posted on the Maryland Nutrient Trading Marketplace, where participants can exchange information with potential buyers on credit availability, credits desired, quantity, and price. Trading contracts are for 10 years and are paid through annual payments to the landowner.

For more information on the developing Maryland Nutrient Trading program, you can go to www.mdnutrienttrading.org/. A good local source of information is the Queen Anne's Soil Conservation District office in Centreville.

Nutrient trading is an exciting development. It can: reward Maryland farmers for good stewardship; provide access to a significant new source of annual revenue for farmers; and accelerate BMP implementation in the Bay watershed. These are all good results!

Dana York is President of Green Earth Connection, a consulting organization that works with agricultural and environmental organizations and agencies on issues related to the Chesapeake Bay. She lives in Centreville and was previously the Associate Chief and chief operations officer of USDA's Natural Resources Conservation Service.

EDITORIAL: TESTING THE WYE

Tom Leigh, marine biologist and Miles-Wye Riverkeeper, recently delivered the first report card on the condition of the main stem of the Wye River, known in the old days as the “Back Wye”. This branch of the Wye River (named by the famous Lloyd family after the River Wye in Wales) is separated from Eastern Bay by Bennett Point; its headwaters start up near Queenstown.

Tom’s organization, the Midshore Riverkeeper Conservancy (MRC), gives the Back Wye good marks for dissolved oxygen, essential to all aquatic life, but poor marks for water clarity. Water clarity is the key to allowing light to penetrate deeply enough below the surface to support growth of underwater grasses that absorb nutrients and provide food and habitat for invertebrates, fish and waterfowl.

The situation is pretty much the same in the other major Wye branch, the Wye East, formerly known as the “Front Wye”, which forms the boundary between Queen Anne’s and Talbot between the tip of Bennett Point and Wye Mills. Here MRC has given its second annual report card, which says: good dissolved oxygen, poor water clarity – but also a very bad problem with algae (algae won’t be measured in the main stem of the Wye until next year).

The data that Tom and his cohort of volunteers collect are vital to understanding the condition of particular rivers and deciding what pollution reduction strategies should have priority. Historically, MRC says, government agencies have largely done their monitoring on a Bay-wide scale, with, for example, just three test sites in the Choptank and one in the Eastern Bay.

Going forward, Tom will be testing, and reporting on progress or lack of it, at a dozen sites in the Wye alone. As a result, we’ll all be learning much more of what we need to know to protect and restore another of the major rivers in our area.



Working the Wye

Photo Credit – David Godfrey

The Queen Anne’s Chronicle

**The Queen Anne’s Chronicle is published by
Queen Anne’s Conservation Association.**

Chris Pupke – Chairman of the Board

Jay Falstad – Executive Director

Mary Campbell – Editor

Queen Anne’s Conservation Association (QACA), a nonprofit 501(c)(3) corporation, is the Eastern Shore’s oldest conservation organization. Its mission is to promote stewardship of Queen Anne’s County’s natural resources and to protect its rural character and small towns while encouraging the management of prudent and sustainable growth.

Queen Anne’s Conservation Association

P.O. Box 157 | Centreville, MD 21617 | www.QACA.org

COMMISSIONERS’ MEETINGS

Here are selected items summarized from the approved minutes of the County Commissioners’ meetings.

February 14, 2012. The Commissioners:

- Received and forwarded to the Planning Commission a text amendment proposed by Mears Associates to increase the height limitation and make other changes for certain mixed- use (residential and nonresidential) buildings in the Kent Narrows area.
- Retained retirement plan consultant to develop a new plan that would be required for employees hired after July 1, 2012 and voluntary for existing employees.
- Approved distribution of a grant from the State of \$11,592 to Queen Anne’s County Christian Assistance, a non-profit, faith-based organization operating two homeless shelters in QAC.
- Approved a waiver for Miltec UV of \$6,052 in development review fees related to construction of a new corporate headquarters and manufacturing facility in the Matapeake Professional Park.
- Received and forwarded to the Planning Commission, Simmons recusing, text amendments proposed by Richard Reinheimer and David Nelson relating to weddings and other events at bed and breakfast operations in the County.
- Granted water and sewer allocation to VJ Ventures’ 14-lot subdivision on Grasonville Cemetery Road.
- Received information from Chief Sanitary Engineer Quimby that he had applied for a \$6.5 million grant to design and construct an 8-mile sewer line to convey wastewater from 9 southern Kent Island communities to the KNSG treatment plant.

February 28, 2012. The Commissioners:

- Made retirement incentive options available until October/November of this year to 73 senior County employees, estimated to result in 19 actual retirements and potential net savings in salaries and benefits of nearly \$1 million for FY 13.
- Received and forwarded to the Planning Commission citizen-sponsored text amendments that would:
 - Repeal the requirement for tree and shrub buffers to screen residential developments using the “noncontiguous development” technique from adjacent active farmland (submitted by W. Calvin Gray, III);
 - Allow aquaculture as an end use of surface mining pits at crossroads and unincorporated communities throughout the County (William E. Leager);
 - Broaden the zoning law’s definition of “commercial apartment” (currently limited to “a dwelling unit located above the first floor of a commercial building”) (Joe Stevens on behalf of Maryland General Land Co. LLC);
 - Remove the 65,000 square foot (“big box”) limit on retail uses in the Urban Commercial (UC), Suburban Industrial (SI), and Town Center (TC) zoning districts (Joe Stevens on behalf of Business Queen Anne’s and two of its directors, Nick Deoudes and Colby Garrett);
 - Address Ordinance 08-20’s limitation of the maximum area disturbed by any major extraction operation to 20 acres at a time (Stephen Meehan on behalf of Roland J. Karbaum and Merrick Farm, LLC); and

- Restore minor extraction operations (5 or fewer acres) as permitted uses in open space associated with developed parcels (Stephen Meehan on behalf of Roland J. Karbaum and Merrick Farm, LLC).

- Designated “Responsibility” as the Character Counts! Pillar of the Month for March, 2012.
- Received an update from County Administrator Todd reporting personnel savings since March 2010, excluding savings from furloughs, of \$5.2 million achieved through retirements, attrition and reductions in force affecting 83 positions.
- Received presentations on options to reduce the cost of County healthcare benefits.
- Adopted legislation providing a property tax credit, under specified conditions, for businesses expanding their facilities and creating new jobs.

March 13, 2012. The Commissioners:

- Met as the Roads Board for consideration of the 2012 Mosquito Control Program and for an update on the County Roads Program under the condition of Highway User Revenue (HUR) remaining reduced by over 95%. (Information on the specific roads projects discussed is available at www.qac.org in the Roads Board Minutes of this date.)

March 27, 2012. The Commissioners:

- Appointed to the Ethics Commission Richard Smith and Robert Udoff as members and Dale Anderson as alternate.
- Designated “Trustworthiness” as the Character Counts! Pillar of the Month for April, 2012.
- Reviewed draft FY 2013 Operating and Capital budgets as presented by Administrator Todd, Finance Director Seeman, and Budget Analyst Rank:
 - The draft Operating Budget of \$107,598,600 is \$0.8 million above the FY 2012 budget. Revenues are essentially flat, with income tax revenue increasing by \$1.1 million due to last year’s rate increase and property tax revenue falling by \$0.4 million due to declining assessments. The budget includes no new positions.
 - The draft Capital budget totals \$7.9 million, including Sheriff’s Office cars, fiber network infrastructure, solid waste equipment, portable classrooms, Stevensville Middle renovation design, Pier One Road relocation, public works equipment and road maintenance/repair, and water/sewer.
- Introduced proposed ordinances concerning community piers and emergency services.
- Met with representatives of incorporated Towns re County funding.
- Allowed the Kent Narrows Development Foundation to move forward with the Chesapeake Exploration Center revitalization project per their presentation.

Correction: Press and Public Comment has not been restored to a fixed time near the beginning of the Commissioners’ regular meetings, as the January 10, 2012 Minutes seemed to say and as we wrongly reported in the last issue. So we retroactively withhold our editorial applause, noting that in 2012 the number of citizens speaking at Press and Public Comment is averaging fewer than 2 per meeting – very different from earlier years.

WHAT YOU ALWAYS WANTED TO KNOW ABOUT TMDL'S AND WIP'S

Q. What is a TMDL?

A. The federal Clean Water Act (CWA) sets an overarching environmental goal that all waters in the United States should be fishable and swimmable. The CWA requires States to submit to EPA their plans for achieving and maintaining water quality for recreation, fish and wildlife propagation, public water supplies, and industrial and agricultural uses.

The CWA also requires that jurisdictions develop every two years – with EPA approval – a list of their “impaired” waterways, the ones that do not meet water quality standards (the so-called “303(d) list”). For these impaired waterways, a “TMDL” must be developed. A TMDL identifies the “total maximum daily load” of a pollutant that the waterway can receive and still meet water quality standards.

Q. Why is a TMDL being developed for the Chesapeake Bay and its tidal tributaries?

A. The Bay TMDL was prompted by insufficient progress in restoring water quality in the Chesapeake Bay and its tidal tributaries. The TMDL is required under the federal Clean Water Act, after the Bay was finally listed as impaired in 1998, and it responds to lawsuits brought in Virginia and the District of Columbia. The Bay TMDL is a keystone commitment of the federal strategy to meet President Obama’s 2009 Executive Order to restore the Bay.

Q. How does the Bay TMDL compare with TMDL's for other impaired waterways?

A. More than 40,000 TMDL's have been completed across the United States, but the Chesapeake Bay TMDL, comprising 92 smaller TMDL's for individual tidal segments, is the largest and most complex thus far. It seeks to reduce pollutants from throughout a 64,000-square-mile watershed in six states and the District of Columbia. The area of the watershed is 16 times that of the Bay itself, a ratio much higher than any comparable watershed in the world.

Q. How are the Bay and its tidal tributaries impaired?

A. Most of the Chesapeake Bay and its tidal waters are listed as impaired because of excess nitrogen, phosphorus, and sediment. These pollutants cause algae blooms that consume oxygen and create “dead zones” where fish and shellfish cannot survive, block sunlight that is needed for underwater Bay grasses, and smother aquatic life on the bottom.

Q. What are the sources of Bay pollution?

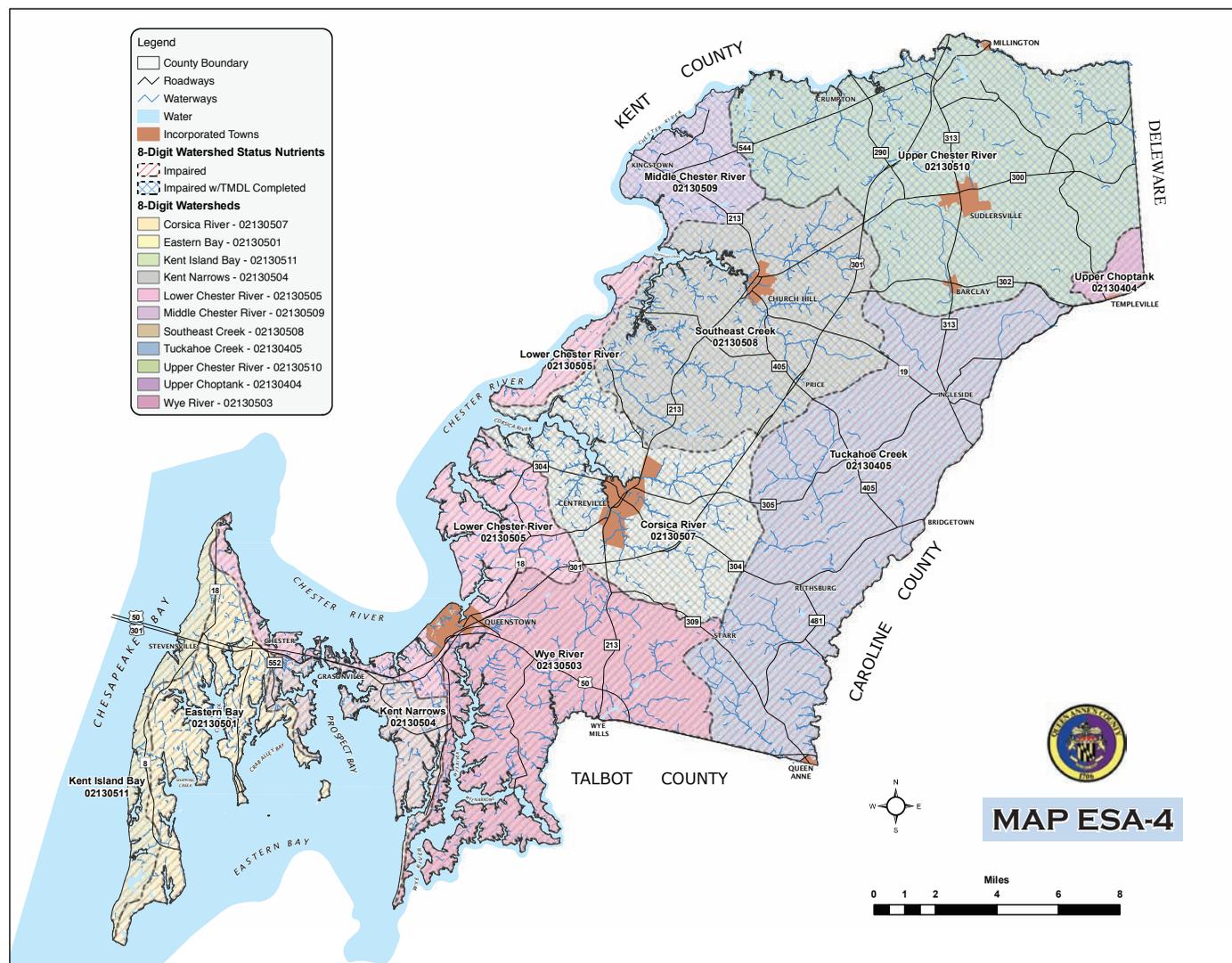
A. The high levels of nitrogen, phosphorus and sediment enter the water from a variety of sources, including agricultural operations, urban and suburban runoff, wastewater facilities, onsite septic systems, air pollution, and other sources.

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QUEEN ANNE'S COUNTY COMPREHENSIVE PLAN UPDATE MARYLAND

WATERSHEDS

NOTE: A WATERWAY IS IMPAIRED IF NITROGEN, PHOSPHORUS, OR A RESULTING WATER QUALITY CHARACTERISTIC PREVENTS ATTAINMENT OF A DESIGNATED OR EXISTING USE SUCH AS LIMITING OR PROHIBITING USE AS A PUBLIC WATER SUPPLY, OR FOR SWIMMING OR FISHING.



A watershed is a drainage area – an area of land where all of the water under it or draining off it goes into the same place. The 2010 Comprehensive Plan contains this map depicting the parts of Queen Anne's County that lie within particular watersheds.

Watersheds can obviously be identified at different size levels, depending on the place chosen as the point to which the drainage goes. For example, the Chesapeake Bay drains a very large watershed (and QAC lies entirely within it); the Upper Chester River drains a much smaller area; and Red Lion Branch, an Upper Chester tributary, a smaller one still.

The Comp Plan map is based on the MDE/DNR “8-digit” watersheds in which Queen Anne's County lands lie (8-digit referring to a standard watershed classification system in which the larger the watershed, the fewer digits after its name).

At the watershed size level chosen in this map, eleven different watersheds are shown, and it's interesting to see which watershed you live in and then perhaps to get out a more detailed map and see what creeks and streams near you are in your watershed and which are in an adjacent watershed.

Also interesting, but sad, is that all of the color-coded watersheds are shaded with diagonal lines denoting **Impaired**. Every 8-digit watershed in Queen Anne's County is “impaired” because (as the somewhat garbled Note on the map tries to say) pollutants in the watershed keep its waters from meeting federal and state clean water standards.

Phase II WIP, continued from Page 1

Saving the Bay: A Short History.

History tells us that in 2009 the President ordered EPA to get moving, exercise authority it had long had, and adopt a federally-led Bay clean-up strategy that could actually succeed -- unlike the less successful efforts of the past three decades that had been led largely by the States.

EPA responded to President in 2010 with a “pollution diet” for the Bay: **the Chesapeake Bay total maximum daily load, or “TMDL”**. The TMDL specified the reduced levels of the major pollutants (nitrogen, phosphorus, and sediment) necessary to get the Bay off the nation’s list of “impaired waters”. It was the largest TMDL ever developed by EPA, because, given the enormous size of the Bay watershed, it had to be made up of 92 smaller TMDLs.

In addition, EPA required the Bay watershed jurisdictions to develop WIP’s, which is what first got the *Chronicle’s* attention. WIP’s are, in a word, the road maps for how the Bay watershed jurisdictions are going to get their pollutant loadings down to the TMDL levels by 2025, the final target date for all this. (More detail is in the related article starting on page 5: *What You Always Wanted To Know About TMDL’s And WIP’s.*)

What’s Been Happening

EPA and the Bay watershed States have been working closely together on the new clean-up effort. Maryland produced its first WIP at the same time that the EPA produced the TMDL, and now Maryland has completed a more developed “Phase II WIP”, submitted to EPA at the end of March.

Maryland’s Phase II WIP specifies the interim (2017) and final (2025) target pollutant loads for the State’s five “major basins”: Potomac, Eastern Shore, Western Shore, Patuxent, and Maryland’s portion of the Susquehanna River basin.

For the Eastern Shore, the big item is our obligation to reduce nitrogen, for which agriculture, the Shore’s major land use, is the major source. By 2025 the Maryland Eastern Shore

is supposed to get its nitrogen to the Bay down from about 16 million pounds per year in 2010 to a little over 12 million. That’s a 23% reduction over 15 years. A hopeful perspective is supplied by the fact that the Maryland agricultural sector as a whole has already achieved very substantial reductions in its nitrogen loading to the Bay. So the hope is that more of the same can be done here.

Following EPA guidance, Maryland developed its Phase II WIP in a year-long collaboration with local partners, including county and municipal staff, soil conservation managers and other local decision makers, as well as a variety of organizations and business interests. That meant that Queen Anne’s County was involved, and you can find our very own WIP on the MDE website in Section III of Maryland’s Phase II WIP. Go to http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Pages/FINAL_PhaseII_WIPDocument_Main.aspx and click on [Local Plans](#). (For the full detail on the targeted reductions on the Eastern Shore of each major pollutant, by source, click on [Appendix B.pdf](#).)

The QAC Phase II WIP

Our QAC Phase II WIP was put together by a distinguished local team of 19 individuals including two County Commissioners and County staff, County-based State officials, town officials and citizens, and agriculture and conservation representatives. The QAC WIP takes a close look at the problem of septic systems and says this is going to be difficult.

We have over 4000 septic systems in the QAC Critical Area, and the Maryland TMDL/WIP requirement is that residents upgrade over 2500 of these by 2017, when at present we are only upgrading about 70 per year. At \$12,000 per upgrade, the QAC WIP team puts the possible total cost at \$30 million. It then



Bay Bridge Photo Credit – David Godfrey

offers the following general observation:

“It is anticipated that in order to achieve the Phase II WIP goals it will take significant funding, staffing and other resources that the County currently does not possess. As funding from state and/or federal sources or grants becomes available, planning and implementation of projects becomes more feasible.”

The QAC WIP team was evidently told not to address the big issue, agriculture, in any detail, as that was being handled elsewhere. What QAC’s obligations are with respect to agriculture can now be seen in a series of tables just recently posted on the MDE website at http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Pages/WIP_Phase_II_County_Strategy_Summaries.aspx. The agriculture requirement is a 37% reduction of nitrogen from cropland by 2025, and a 17% reduction of sediment run-off. The principal BMP’s that are going to achieve these results appear to be more acreage in cover crops, irrigation management, poultry litter incorporation, and “decision agriculture”, the next step beyond precision agriculture.

Outside of agriculture, the way forward to meeting QAC’s target pollution loadings includes a variety of BMP’s in towns and developed areas, ranging from stormwater management and stream restoration to tree planting, street sweeping, and rain gardens. (Visit the Library rain garden in Centreville to see a model example of this last item.)

It now seems that State personnel will no longer be the conveners of local WIP meetings, so someone in County government should take the lead in further developing and implementing the QAC WIP. This would be a good project for the two Commissioners (Dunmyer and Simmons) who served on the WIP team. Guiding QAC successfully through the Bay clean-up exercise in the coming years will have to be a priority for County leadership.

TMDL’S AND WIP’S, continued from Page 6

Q. When does the TMDL anticipate the Bay will be restored?

A. The Bay TMDL is designed to ensure that all pollution control measures needed to fully restore the Bay and its tidal rivers are in place by 2025, with at least 60 percent of the actions completed by 2017. While it will take years after 2025 for the Bay and its tributaries to fully heal, EPA expects some areas of the Bay will recover before others and there will be gradual and continued improvement in water quality as controls are put in place around the watershed.

Q. What happens now that the TMDL has been established?

A. Now that the TMDL has been established, the focus shifts to implementation of “Watershed Implementation Plans”, or “WIP’s”, to reduce pollution on-the-ground and in-the-water.

Q. What is a WIP?

A. The Chesapeake Bay TMDL is unique because of the extensive measures EPA and the jurisdictions in the Bay watershed have adopted to ensure accountability for reducing pollution

and meeting deadlines for progress. The cornerstone of this accountability framework is the Watershed Implementation Plan, or WIP. The WIP serves as the jurisdiction’s detailed roadmap for how and when it plans to meet its pollutant allocations under the TMDL. EPA requires that the WIP meet a standard of providing “reasonable assurance” that the TMDL will be achieved.



Queenstown

Photo Credit – David Godfrey

Q. What are the phases of the WIP process?

A. In their Phase I WIP’s in the fall of 2010, the Bay watershed jurisdictions subdivided the Bay TMDL allocations among pollutant sources, evaluated tools to implement the allocations, and outlined a schedule for implementation.

In the Phase II WIP’s submitted in draft at the end of last year and finalized in March of this year, the jurisdictions more closely engaged local governments, watershed organizations, conservation districts, citizens and other key stakeholders and provided local area pollution targets for implementation on a smaller geographic scale.

Phase III WIP’s in 2017 are expected to provide additional detail on restoration actions beyond 2017 and to ensure that the 2025 goals are met.

Q. How will EPA be monitoring progress by the States and the District?

A. The accountability framework overseen by EPA includes the WIP’s, the two-year milestones, EPA’s tracking of restoration progress, and, as necessary, specific federal actions if the jurisdictions do not meet their commitments. If progress is insufficient, EPA may place additional controls on wastewater treatment plants, large animal agriculture operations, and municipal stormwater systems, as well as initiate compliance and enforcement activities.

The foregoing is largely taken from material on the EPA website, www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/FrequentlyAskedQuestions.html.

NESTING TIME

By JANE SCOTT

Spring is hard to catch hold of, especially this year when the weather has been capricious to say the least. Overnight, it seemed, the early daffodils faded, the grass greened up and the woods filled out. One had to be careful not to miss it.

Now it is May, a time when warblers and other songbirds slip into our county under cover of darkness having flown for thousands of miles through soft starlit nights. Some will tarry but a week or so, on their way to more northern nesting grounds, while others, like the orioles, thrushes and kingbirds, will stay all summer. May also brings the high-pitched twittering of the chimney swifts as they circle above the house in the evening light.

The Songs of Spring

All these birds will nest and rear their young in our gardens, woods and fields, safely hidden from our prying eyes behind a cover of new green leaves. Not that songbirds don't advertise; each spring sunrise is greeted with their incessant musical clamor, and every year I try to get better at naming each singer by their song. Some are relatively easy; a phoebe plaintively calls his name, a cardinal whistles "Cheer, Cheer!" and a towhee orders us to "drink your tea." Yet like a complex Bach fugue, these few familiars are intermingled with so many whistles, buzzes and trills that all the ditties I make up to fix them in my mind soon vanish like smoke.

Ornithologists tell us these exuberant singers are either defending their nesting territories — singing "mine, mine, MINE!" as ferociously as they can — or doing their best to attract a mate. While I don't doubt that this is true, it hardly seems to do credit to a jubilant May dawn. Aren't they, on some level at least, simply celebrating the arrival of spring?

Nesting Time

Soon it will be time to look for the nests. I confess I am not very good at this. Often it is not until the leaves fall in autumn that I discover one practically over my head. However, if you keep an eye on the birds in your garden you will sometimes see them fly repeatedly into a tree or bush with a bit of nesting material. We were once lucky enough to have an oriole construct her intricate pouch of plant fibers right over our terrace. Near the end of her labors, she got right down inside and we could see the entire nest pulsate as she poked and prodded it into shape. By the time she had finished, however, the unfolding leaves had become so dense that the nest had virtually disappeared: it was now only an oddly shaped thickness in the foliage.



Baby bluebirds in the nest on Wye Island Photo Credit – David Godfrey

Each species of bird builds its own kind of nest, some intricately woven, others mere bundles of loose sticks. The nest of the mourning dove, for instance, is so flimsy that you can see the eggs from below, while that of the goldfinch can be so tightly woven that its nestlings have been known to drown in a hard rain. Chickadees, wrens and bluebirds all originally sought out hollow

trees, but now seem perfectly happy to move into birdhouses. The female robin uses her body to mold a deep cup of grasses on a foundation of soft mud. Barn swallows also use mud to stick their nest of straw and feathers to a rafter or beam, while chimney swifts favor twigs and hide their structures in hollow trees and unprotected chimneys. But the prize for the smallest and most intricate nest goes to the ruby-throated hummingbird. A fairy-cup the size of a fifty-cent piece, it is built of lichens and bud scales and lined with plant down and spider silk.

Choosing Trees

Certain birds also favor certain trees. Orioles prefer elms when they can find them, but these days, must often settle for a willow or maple. Robins also like maples as well as apples, catbirds prefer dense thorny briars, and chipping and song sparrows usually select prickly hedgerows and brushy thickets. Yellow warblers also like thickets especially at the edge of marshes. They, incidentally, have an interesting strategy for fooling the parasitic cowbird, a species that lays its eggs in other birds' nests. The warbler simply buries the eggs of the intruder, building another layer on top for its own.

The good news is that there is still plenty of time. Not only do many birds raise more than one brood, the nesting season, which started in late January with the great horned owl, will not be over until sometime in August. That's when the goldfinches will find a good supply of thistle down to line their nests and plenty of seeds to feed their young. Happy nest hunting!

Jane Scott, a writer and illustrator, is the author of *Between Ocean and Bay: A Natural History of Delmarva* (Centreville, MD: Tidewater Publishers, 1991), and *Field and Forest, A Guide to Native Landscapes for Gardeners and Naturalist* (Blackburn Press, 2002) as well as other works. She traces her roots in Delaware back to the 1730's and now lives on the Eastern Shore.

Keep the Honey Bee Healthy, *continued from Page 3*

Even the Eastern Shore of Maryland imports honey bees to pollinate many of our local food crops (although our largest crops, soybeans, corn and wheat, are wind- or self-pollinated).

Threats to the Honey Bee

Recognizing the importance of honey bee pollination to our food supply, we naturally become concerned when we learn that the honey bee population is declining significantly. There are several causes. The global economy results in the importation of many products into this country carrying both disease and harmful insects. The honey bee has suffered since the 1980's from small mites that feed on the hemolymph (blood) of the bee and transfer viruses that have a severe impact on its health and lifespan. The media have featured many articles in recent years about the impact, and possible causes, of what has been termed "Colony Collapse Disorder" — the sudden disappearance of the worker bees from the hive. Here in Maryland about 30% of the managed honey bee colonies do not survive the winters.

Another factor impacting the honey bee is the decline of plants that provide the nectar (carbohydrate) and pollen (protein) essential for their survival. Ever-expanding construction removes trees and plants necessary to the life of the bee. Farming itself can be a problem: here on the Eastern Shore much of the land is devoted to crops (corn, soybeans, wheat) that do not provide nectar for the honey bee.

Still another impact comes from global warming. Maryland beekeepers are participating with NASA in a research effort that is documented on the following website: <http://honeybeenet.gsfc.nasa.gov/>. (If

you go to this website and click on the "Regional Scale Hives" image, you can also find out more about a couple of us QAC bee-keepers, myself in Church Hill and Jay Falstad in Millington.)

How You Can Help

Homeowners can help honey bees by including bee-friendly plants in their landscapes. Good choices include sedum Autumn Joy, ageratum, sweet autumn clematis, zinnia, salvia rhea, nepeta Walker's Low, lavender, purple coneflower, sunflower, crocus, aster purple dome, monarda, mint, and cleome, plus crape myrtle and the ever-present tulip poplar and black locust trees. You can visit <http://www.helpthehoneybees.com/> to learn about planting a honey bee garden, or at least including a few of these plants on your property.

Other ways you can help in the effort to increase the health of our honey bees include:

- Encourage the younger generation to become interested in beekeeping -- it teaches biology, nature, accounting, accountability, responsibility, woodworking, marketing and other skills.
- Support your local beekeepers by purchasing "direct from the bees."
- When you shop for trees and plants, consider those that are nectar producing.
- Need a gift for a friend? Consider a jar of honey.

David Smith lives and keeps bees in Church Hill. He started keeping bees in 1946. He is a life member of the Maryland State Beekeepers Association, a past-president of that organization, and one of a dozen Maryland beekeepers certified by the Eastern Apicultural Society as a Master Beekeeper.

SAVING THE BAY: A SHORT HISTORY

1960's: Public opposition grows to use of U.S. rivers as “convenient, free sewers” (*Time*); Lake Erie becomes national poster child for water pollution problem as fish kills foul shoreline and, in 1969, Cleveland’s Cuyahoga River bursts into flames.

1970: The first nationwide Earth Day observance (April 22) launches modern environmental movement; Environmental Protection Agency created (December 2).

1972: Congress passes water pollution control law, later known as the Clean Water Act, “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters”. The Act sets the goal that all waters in the United States will be fishable and swimmable. States are required to list, and put on a “pollution diet”, all “impaired” waterways that do not meet water quality standards.

1973: Senator Charles “Mac” Mathias (R-MD), with EPA Administrator Russell Train and Interior Secretary Rogers Morton, takes a 5-day tour of the Chesapeake Bay for a first-hand look at its problems; Mathias subsequently sponsors legislation for scientific evaluation of the Bay’s condition.

1976: EPA conducts 7-year, \$27 million research study to evaluate the Bay’s ecosystem, finding that excess nutrient pollution is the main source of degradation.

1980: Catalyzed by ongoing EPA study, Chesapeake Bay Commission is established by Maryland and Virginia (joined by Pennsylvania in 1985) to coordinate Bay-related policy across state lines and to develop shared solutions.

1983: One-page agreement among MD, VA, DC, PA and EPA recognizes “historical decline in the living resources of the Chesapeake Bay” and establishes office in Annapolis to house Chesapeake Bay Program (www.chesapeakebay.net) guided by EPA and staffed by employees from federal and state agencies, non-profit organizations, and academic institutions.

1987: A second, more detailed Chesapeake Bay Agreement, signed by MD/VA/PA Governors, DC Mayor, EPA Administrator, and Bay Commission Chair, pledges action to “develop, adopt, and begin implementation of a basin-wide strategy to equitably achieve by the year 2000 at least a 40 percent reduction in nitrogen and phosphorus entering the main stem of the Chesapeake Bay”.

1990's: At first, earlier phosphate bans, sewage plant upgrades, and success of rockfish moratorium create public optimism about Bay clean-up progress. But the 2000 goals for nitrogen and phosphate reduction prove to be unattainable, crabs

decline to historic low, and states and EPA continue to fail to list Bay waters as “impaired” under the Clean Water Act. Responding to these failures, environmental groups file more than 20 lawsuits.

1998: Chesapeake Bay and tributaries are finally listed as “impaired”. Settlement of lawsuit brought by conservation groups obligates states to implement a pollution diet for Bay waters by 2010 (and if not, by EPA by 2011). The diet must set the “total maximum daily load” (TMDL) of pollutants (nitrogen, phosphorus, sediment) allowed to enter the Bay consistent with maintaining its water quality as fishable and swimmable under the standards of the Clean Water Act.

2000: Chesapeake Bay Agreement partners are joined for the first time by the “headwater states” of Delaware, New York, and (in 2002) West Virginia. Together, in a new, third agreement called Chesapeake 2000, they pledge to accomplish, by 2010, reductions in nutrients and sediment sufficient to remove the Bay and its tidal tributaries from the “impaired waters” list. Other Bay goals for 2010 set by Chesapeake 2000 include:

- A tenfold increase in native oysters in the Chesapeake Bay
- Watershed management plans in two-thirds of the Bay watershed
- Restoration of 25,000 acres of tidal and non-tidal wetlands
- Permanent preservation from development of 20 percent of the land area in the watershed
- Reduction by 30 percent of the rate of sprawl development of forest and agricultural land in the Bay watershed (by 2012)
- Restoration of 1,050 brownfield sites to productive use
- Expansion by 30 percent the system of public access points to the Bay waters and resource sites.

2007: EPA and governors of Bay states concede that 2010 nutrient and sediment reduction goals will not be met. Despite some progress on some fronts, none of the seven other major Chesapeake 2000 goals listed above will be achieved by 2010.

2008: Rockfish still rising, but oysters, at less than one percent of historic level, are now so few that they take a year to filter the Bay’s waters that they once filtered in less than a week. While the Chesapeake effort falters, other clean-ups make history: Hudson River has more oxygen, Boston Harbor is less septic, and Tampa Bay underwater grasses come back. (Clean-ups like these are easier: Hudson River watershed, biggest of the three, is only one-fifth the size of the Chesapeake’s.)

Chesapeake Bay Foundation (CBF), with sport fishing and watermen’s groups and former elected officials, gives notice of intent to sue EPA to compel firm, enforceable pollution limits.

2009: CBF and co-plaintiffs file suit against EPA: *Fowler v. United States of America* (January 5). President Obama

inaugurated (January 20), issues (May 12) Executive Order asserting new federal leadership in achieving the Bay restoration goals set but not achieved by the Chesapeake 2000 agreement; Order calls for restoration strategy to be in place in one year (by May 12, 2010). States pledge new two-year milestones on way toward clean-up; Fowler plaintiffs criticize states’ milestones as more of the same.

2010: EPA enters (May 10) settlement agreement with CBF and other Fowler plaintiffs under which EPA obligates itself to establish enforceable Bay pollution diet (TMDL) by the end of 2010 (it has been quietly working on that for some time) and to take a variety of other Bay-restoring steps through 2017, including requiring states to develop, by November 2011, watershed implementation plans (WIPs) to meet the TMDL’s nitrogen, phosphorus and sediment limits.

EPA publishes (December 29) the Chesapeake Bay Total Maximum Daily Load (TMDL), a comprehensive pollution diet for the Bay comprising 92 smaller TMDLs for individual Bay tidal segments. The TMDL – the largest ever developed by EPA – identifies the pollution reductions required by 2025 from all major sources of nitrogen, phosphorus, and sediment to meet Clean Water Act standards and get the Bay off the impaired waters list.

2011: Agribusiness groups sue to block the Bay TMDL and the House of Representatives tries to kill it but the Senate disagrees. Pennsylvania and New York grumble, and concerns about the total clean-up cost are widespread. The program nonetheless moves forward through the turbulence, and in December, as the



Photo Credit – David Godfrey

WIPs are coming in to EPA from the states, Congress increases funding for EPA’s Bay effort by \$3 million to \$54.7 million for 2012.

2012: Bay’s crab population rises to more than triple its record low in 2007, at highest level since 1993; baby oyster survival rate reported to have doubled in 2011 from low in 2002, at highest level since 1985.

* A Calendar Of Verses

MAY: TO THE RIVER

...How oft –

In darkness and amid the many shapes
Of joyless daylight, when the fretful stir
Unprofitable, and the fever of the world,
Have hung upon the beatings of my heart –
How oft, in spirit, have I turned to thee,
O sylvan Wye! Thou wanderer thro’ the woods,
How often has my spirit turned to thee! . . .

– William Wordsworth

JUNE: TO THE SEA

... I must go down to the seas again, for the call of the running tide
Is a wild call and a clear call that may not be denied;
And all I ask is a windy day with the white clouds flying,
And the flung spray and the blown spume, and the sea-gulls crying. . .

– John Masefield