



The Tidal Exchange

Newsletter of the New York ~ New Jersey Harbor Estuary Program

Fall 2002

THIS ISSUE

HARBOR ESTUARY NEWS

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Taking the Pulse of the Harbor Estuary

New Report Tracks Human Health-related Environmental Indicators

Nancy Steinberg



Perhaps the hardest questions for those involved in environmental restoration and protection to ask themselves are, “how are we doing? Are things improving?” Tracking progress is a crucial undertaking, whether one is concerned with the recovery of a patient, status of the economy, or health of the environment. The approach to evaluating the health of all three of these examples is essentially the same: examine trends in indicators that will reveal something meaningful about the condition or status of the subject. Much as vital statistics or economic indicators can reflect the health of a medical patient or the state of the economy, environmental indicators can tell us about the condition of the environment: whether it is improving, remaining stable or becoming more degraded. Environmental indicators can help us to determine whether the management tools employed and the money spent thus far have been effective in protecting the estuary - and they can prove invaluable in guiding future management efforts.

In March of this year, the Hudson River Foundation completed the first of two reports for the Harbor Estuary Program tracking trends in

environmental indicators for the estuary. This report, entitled *Harbor Health/Human Health: An Analysis of Environmental Indicators for the NY/NJ Harbor Estuary*, focuses on environmental indicators related to human health, while the next report will examine more general environmental indicators. *Harbor Health/Human Health* examines trends over time and across the harbor for 10 indicators ranging from sediment contamination to numbers of beach closures to incidence of human illness caused by consuming contaminated shellfish. Indicators were selected from a list of recommended indicators outlined in HEP’s 1996 Environmental Monitoring Plan. Data for the report were gathered from a variety of government agencies, academic scientists, and private organizations involved in monitoring the health of the estuary.

The report’s findings generally depict an estuary that is improving in quality, but also highlight the fact that more work lies ahead. Figure 1 (data from New York State Department of Health) shows that incidence of typhoid and hepatitis related to consumption of

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The Tidal Exchange Fall 2002

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The Tidal Exchange is a publication of the New York – New Jersey Harbor Estuary Program (HEP), a partnership of federal, state and local governments, scientists and citizens working together to protect and restore the natural resources of the estuary. The purpose of the newsletter is to promote an informative dialog on issues related to the Harbor Estuary Program.

The HEP is sponsored by the States of New York and New Jersey and the US Environmental Protection Agency. The HEP Management Committee consists of representatives from the US EPA, NJ DEP, NYS DEC, NY and NJ local governments, US ACE, US DOI, NOAA, Port Authority of NY & NJ, Interstate Environmental Commission, NJ Harbor Dischargers Group, NYS DOS, Science & Technical Advisory Committee and Citizens Advisory Committee.

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Update from the Program

Bob Nyman

For many of the key HEP participants, it appears that this is a time of retirement, promotion, and reorganization. There has been significant change on the Policy Committee and, to a lesser extent, on the Management Committee. Because there are so many new people, I thought it would be useful to provide an overview of three of the major segments of the Harbor Estuary Program structure: the Policy Committee (PC), the Management Committee (MC), and the Program Office. Future articles will focus on the makeup and activities of the technical work groups and advisory committees.

Membership on the PC and MC was established early on in the program. Since then, it has been modified only slightly by Policy Committee resolution. The fixed number of seats on the PC (seven) and MC (nineteen) are allocated to organizations or categories, not specific people. While some of the

positions are in flux due to retirements and elections, the following list is a snapshot of who is currently involved with overseeing the activities of HEP.

Policy Committee:

The PC is at the top of the food chain. These are the high level, big picture thinkers. They meet twice a year, or as necessary, to resolve issues and provide overall program direction. The PC also approves the program budget and annual work plan in the Spring of each year. All members of the PC have representatives on the MC who are responsible for keeping them informed about HEP matters between meetings.

The PC's most recent meeting occurred on October 1st, when one of the main discussion items was the Targets and Goals document. On that item, the PC: approved the five subject areas of that document (Swimming and Fishing, Habitat and Ecological Health, Public Access, Clean

POLICY COMMITTEE

US Environmental Protection Agency, Region II, Chair

Jane M. Kenny, Regional Administrator

Alternate - *William J. Muszynski*, Deputy Regional Administrator

New York State Department of Environmental Conservation

Erin M. Crotty, Commissioner

New Jersey Department of Environmental Protection

Bradley M. Campbell, Commissioner

US Army Corps of Engineers

Brigadier General M. Stephen Rhoades, Division Commander,

North Atlantic Division (current member), *Brigadier General Bo*

Temple (incoming member) Alternate - *Thomas Creamer*

New Jersey Local Governments Representative

J. Christian Bollwage, Mayor of the City of Elizabeth

New York Local Government Representative

Christopher O. Ward, Commissioner, New York City Department

of Environmental Protection

Citizens and Scientific Advisory Committees

Charles S. Warren, Representative

Sediment and Navigation, and Stewardship); charged the MC with developing indicators for the goals and defining a range for each of the targets; approved the idea of working towards an official Governor/EPA Administrator signing ceremony; and requested that they meet again in six months to review progress. Complete minutes from this and past meetings are available on the HEP website, www.harborestuary.org.

Management Committee:

The Management Committee reports to the PC. Members meet quarterly to review progress, identify issues requiring resolution, and make sure that the decisions of the PC are carried out. The MC has broader representation than the PC, and works to integrate issues from across the estuary. The various technical work groups, whose roles will be described in future articles, take their direction from the MC. There is also a subgroup of the MC, known as the Management Committee Work Group, that interacts more frequently to queue items up for MC action.

HEP Program Office:

In September 1998, the Policy Committee approved formation of the HEP Office with an EPA employee as Director. EPA subsequently established the Office on the 24th Floor of 290 Broadway and provided office support services. A portion of the NEP funds are used to support the Outreach Coordinator and the Technical Specialist, both of which are staffed by Sea Grant personnel, one from each state. The New York City Soil and Water Conservation District also has two staff involved with stewardship activities co-located in the HEP Office.

The Program Office is where the day-to-day oversight of the Harbor Estuary Program takes place. The office develops programmatic documents, such as work plans,

MANAGEMENT COMMITTEE

US Environmental Protection Agency, Region II, Chair

Kevin Bricke

US Environmental Protection Agency/ORD

Gerald Pesch

US Department of the Interior

George Frame, Gateway National Recreation Area

US Army Corps of Engineers

John Tavoraro

National Oceanic and Atmospheric Administration

Frank Steimle

New York State Department of Environmental Conservation

Dick Draper

New York State Department of State

Rod McNiel

New Jersey Department of Environmental Protection

Dave Rosenblatt

New Jersey Harbor Dischargers Group

Sheldon Lipke, Passaic Valley Sewerage Commission

New York Local Government Representative

Jim Mueller, NYC Department of Environmental Protection

New Jersey Local Governments Representative

Vacant

Interstate Environmental Commission

Howard Golub

Port Authority of New York and New Jersey

Tom Wakeman

Citizens Advisory Committee Co-Chairs

Steve Barnes, Rahway River Association

Eugenia Flatow, Coalition for the Bight

Citizens Advisory Committee Representatives

Debbie Mans, NY/NJ Baykeeper

Vacant

Science and Technical Advisory Committee Co-Chairs

Fred Grassle, Rutgers University

Dennis Suszkowski, Hudson River Foundation

budgets, review materials, and technical white papers; oversees programmatic grants and mini-grants; tracks CCMP implementation; participates in and coordinates activities of the technical work groups; develops outreach materials (including *The Tidal Exchange*); maintains the HEP website; and supports the operation of the MC and PC. The Program Office also has the ability to prepare its own press releases and get involved in educating elected officials about the Program's activities. ❖

HEP OFFICE

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HEP Outreach Coordinator

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New York Sea Grant

HEP Technical Specialist

Cathy Yuhas,

New Jersey Sea Grant

A City's New Wetland

Four Acres Minus Eleven Houses Equals a New Park for Rahway, New Jersey

Steve Barnes

The people involved with the Rahway wetland restoration project had been working six years toward these four September days; and with fourteen thousand plants in pots and flats laid out in the parking lot of St. John's Russian Orthodox Church adjoining the site, there were "what ifs" going through people's minds. What if the weather's bad tomorrow; what if the volunteers needed for each of the four days of replanting don't show up in the numbers needed; what if...? Like many restoration projects there'd been plenty of other "what ifs" prior to now, and more planning and management put into the project than actual in-ground work; still, by September 10 there'd been plenty of that too.

The four and one-quarter acre site is located inside a bend of the main branch of the Rahway River, at the river's head of tide and not far from the City of Rahway's central

downtown area. At one time there were eleven houses on it; houses that often stood in several feet of water - and a great deal more during hurricane Floyd - when the river overflowed its banks. The City had purchased the houses and helped relocate the families that lived in them as a matter of public safety.

Four and one-quarter acres of open space in a highly urbanized area doesn't go unused in some way for very long, and even before the empty houses were demolished, Rahway River Association and Baykeeper suggested a use - turn the site back into what Nature was saying it should be, a floodplain habitat area. What was unique about their suggestion - other than its highly urbanized location - was that there would be no administrative cost to the City for the project; all that would be required was the City's permission to do the work. The City liked the idea, but naturally wanted to see what kind

of project they wouldn't have to administer.

The six years of the project began in 1996 when Rahway River Association and Baykeeper, the first two partners in the project, contacted the engineering consulting firm they'd been working with on another restoration project - TRC/Omni Environmental Services - who also saw the potential for the project and quickly became the third partner. In April 1999, the preliminary drawings and architect's design were presented to the City of Rahway, and the following month, the City Council gave its approval for the project and even provided funding for the planning work through a grant from FEMA.

But the City, now the fourth partner in the project, didn't own all the land on the site; about a half acre was owned by Union County. Fortunately, the county Parks Department was enthusiastic about the project, and offered to add the



Planting the first pond. Stormwater enters the site from the upper left, river water from the upper right.

entire site to their already extensive network of parks and open space along the Rahway River. The County Freeholders passed a resolution similar to that passed by the City, and the fifth partner in the project was on board.

What came next was over three and a half years of *angst* - a web of ups and downs of planning, searching for funding, applying for permits, and somehow getting around all the stumbling blocks that miraculously appear just when everything's going well - all of which is too complex to adequately explain in less than a three-volume narrative (and too agonizing to relive just yet). Suffice it to say that the Fates were seeing to it that Murphy's Law was liberally applied. However it wasn't the final determinant. In the spring of 2002, the first bulldozer put its blade in the ground.

The significant trees already on the site were retained and the project was designed around them. The site now features a series of four ponds at different elevations - two intermittently wet alternating with two continually wet - all separated from the river by a low berm. At the upstream end, water enters the site from storm drains and from the river when it's above bankfull level. At the downstream end, the lower wet pond connects to the river through an outfall through the berm, which also allows water to enter the site during high tide periods.

Most of the soil excavated to form the ponds was kept on site and used in several ways. After the City removed the asphalt roadways, some of the soil was used to create upland areas over the remaining sub-roadbed; more of the soil was used to form the berms and shaped into raised pathways that allow visitors to tour the site. The cleanest soil - that least laden with rocks and roots - was mixed with composted material and put back into the ponds to create the organic soil layer required for

restored wetland areas. Shaping the ponds went very well; Union County Parks Department contributed the heavy equipment for this, and an operator, John Rapocchio, whose skills with a bulldozer can only be described as artistic. By late August most of the site was ready for replanting.

The four days beginning September 11 were chosen in order to have the replanting serve as a living memorial to the victims of the events of the prior year. For the project partners and their staff they were long days starting just after the sun rose and ending as it was starting to set - and the "what ifs" of the day before turned out to be unfounded. People came from communities throughout the area to help; Boy Scouts and Girl Scouts, parishioners of St. John's Church led by Father Andrew and his family, senior citizens, students, County and City employees, employees of Merck and other corporations, to name just a few. More than 450 volunteers participated over the four-day period.

To say they dug holes and put plants in the ground does little justice to their efforts and all the help they provided, and is an imperfect way to describe what they accomplished. The volunteers quite literally transformed the nearly barren four and one-quarter acres into a living entity. As each section of the site received its plants, insects and birds returned, and new wildlife sightings are still being reported. It's now quite evident that the ecosystem that should be there is well on its way to being reestablished.

The last "what if" - what if it doesn't rain - was also answered favorably. The Rahway Fire Department provided hoses and nozzles, and one of their trucks. The



As volunteers finish planting the last pond, Rahway River Association President Jim Lynch starts watering.

sight of water being sprayed at 1500 pounds pressure from the top of a sixty foot ladder truck over nearly half the site at a time makes one want to give up lugging buckets of water forever. And the Fates had apparently abandoned their application of Murphy's Law - the rains returned a few days later.

There's still more work to be done, and monitoring and maintenance will continue for several years. Technically the project's been very successful; the plants are doing well and all the "plumbing" works as expected. And the insects, birds, amphibians, and mammals that have returned to the site seem to find it acceptable. But the result of the first six years work is perhaps best summed up by one of the ladies, Eleanor, who volunteered for the replanting and visits the site regularly. As a girl, Eleanor lived on the site in one of the houses that was demolished, and climbed in one of the trees that was saved. She said, "It looks a lot better this way." ❖

Steve Barnes is Vice-President of the Rahway River Association and Co-Chair of the HEP Citizens Advisory Committee.

Taking the Pulse

(from page 1)

contaminated shellfish has plummeted since the early part of the last century, reaching 0 cases by the 1990s. This decrease is generally attributed to better sanitary conditions in the estuary, but can also be linked to better education of consumers and more restrictive regulations on shellfish harvesting.

Other positive signs are illustrated in Figure 2 (data from New York State Department of Environmental Conservation), which shows levels of PCBs in striped bass in the estuary. Average PCB concentrations in striped bass flesh have been declining since the late 1970s when their release into the river was banned. (Note, however, that levels increased in the early 1990s in the Albany-Peekskill region due to a sudden release of PCBs after the collapse of an abandoned structure near a General Electric facility.) As of 1998, mean PCB concentrations in all regions were below 2 parts per million (ppm), the Food and Drug Administration (FDA) guideline for commercial sale indicated by a black line on the graph. PCB levels in Long Island Sound striped bass are shown in the inset figure for comparison.

Evidence that more work needs to be done to improve conditions in the estuary is shown in Figure 3 (data from NYS DEC). This graph shows mid-1990s PCB concentrations in a variety of edible estuarine species. The square symbols indicate the mean PCB concentration found in that species for all areas of the estuary, while the lines and circles show the range of concentrations found in individuals of that species. While most mean PCB concentrations are near or below 2 ppm (with the notable exception of blue crab and lobster hepatopancreas, or "tomalley"), the ranges of concentration show that

Incidence of Typhoid, Hepatitis due to Consumption/Handling of Shellfish
New York and New Jersey
(1900-1998)

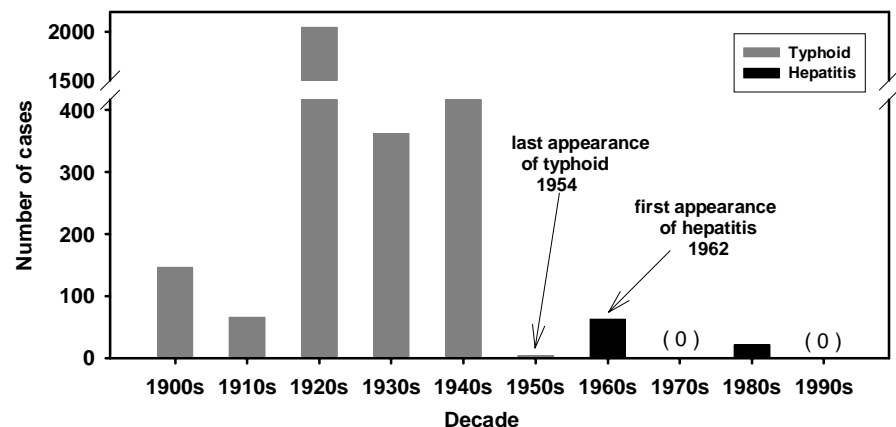


Figure 1: Incidence of typhoid and hepatitis traced to contaminated shellfish. Data from Horn 1990 and Wolf 2001.

individuals of some species are still above the FDA guideline.

It is important to recognize that the 2 ppm FDA guideline for PCBs is 17 years old and increasingly criticized for failing to take into account current information about PCB health effects, especially in relation to recreational fish consumption patterns. More recent health guidance developed by eight states bordering the Great Lakes, using more current science, sets guidelines for fish consumption at much lower concentrations than the standing FDA limits.

In addition to the FDA

guidelines for commercial sale of fish, the states of New York and New Jersey issue health advisories concerning the consumption of recreationally-caught fish in much of the harbor for most of the species referred to here. Advisories can be found on the websites of the New York State Department of Health (www.health.state.ny.us) and the New Jersey Department of Environmental Protection (www.state.nj.us/dep).

Perhaps the biggest challenge in producing the *Harbor Health/Human Health* report was limited data availability. Since HEP

PCB Trends in Striped Bass from the Hudson River Estuary
(1975-1998)

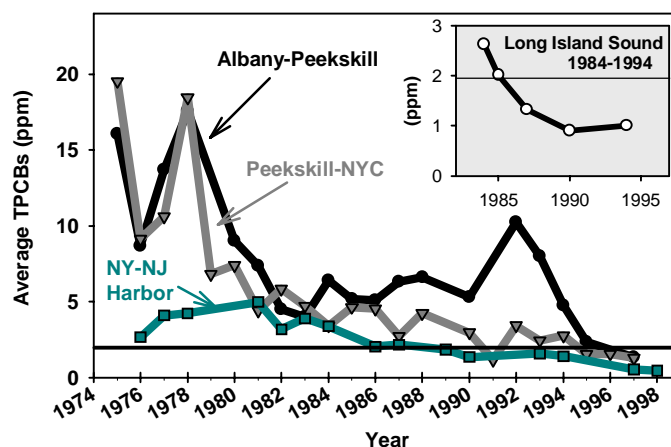


Figure 2: PCBs in striped bass. Horizontal black line indicates FDA guideline of 2 ppm. Data from Sloan 1995, Sloan 1999, and Sloan and Hattala 1991.

had recommended using a number of indicators for which little or no data collection takes place, analyzing trends in those indicators was impossible. Data availability was sometimes a problem even for those indicators included in the report. For each indicator, the authors evaluated the spatial and temporal availability of data. In some cases, data were not available for enough years to determine a trend, and in others data were collected frequently in some parts of the estuary but not at all in others. For other indicators, data were hard to obtain because they were not in electronic format or well organized in a data management system. The report recommends improving data collection for specific indicators, including contaminants in fish tissue, harmful algal blooms, and sediment contamination and toxicity.

Harbor Health/Human Health can provide critical information on how to proceed with environmental protection measures in the estuary. "With this study, we now have a better feel for where to focus our efforts going forward," said Dennis Suszkowski, the Science Director of the Hudson River Foundation and Co-chair of the HEP Science and Technical Advisory

Committee. "Newark Bay and the Kills remain primary geographic areas of concern; fish contamination remains a significant threat to human health, and we are still finding toxic leaks and unexplained concentrations that need to be addressed. While the overall picture is quite positive, there is still much work to be done in cleaning up the harbor."

The companion report examining a broader range of indicators will be released in early 2003. The *Harbor Health/Human Health* report can be downloaded from the Hudson River Foundation's web site, www.hudsonriver.org. Hard copies can be requested by calling the Harbor Estuary Program at 212-637-3816 or by sending e-mail to [info@harboestuary.org](mailto:info@harborestuary.org). ❖

Nancy Steinberg is one of the co-authors of the Harbor Health/Human Health report. Until a recent move to coastal Oregon, she was a Research Project Associate with the Hudson River Foundation. She continues to work for HRF on the broader environmental indicator report for HEP, and works on a freelance basis on a variety of other environmental outreach, communication, and policy-related projects.

PUBLIC INVOLVEMENT AND EDUCATION MINI-GRANT PROGRAM

2003

Request for Proposals

The Harbor Estuary Program is pleased to announce the availability of HEP Public Involvement and Education Mini-grants. As in past years, grants up to \$5000 are available for projects that promote understanding of and participation in the protection and restoration of the Estuary. New this year, HEP will also offer grants up to \$1500 to support public events celebrating National Estuaries Day - September 27, 2003.

Mini-grant projects and events should:

- ✓ emphasize that the NY-NJ Harbor Estuary ecosystem is a living environmental and social resource
- ✓ demonstrate that the public can help to protect the Estuary
- ✓ motivate people to actively participate in its restoration
- ✓ utilize innovative activities to involve people & encourage local action
- ✓ increase public awareness and education



GRANT TIMELINE

Deadline: December 20, 2002
 Grant Awards: February, 2003
 Signing of Contracts: March, 2003
 Projects Complete: February, 2004
 Final Reports Due: March, 2004

The HEP mini-grant forms and instructions are available for download in Adobe PDF format on the HEP website - www.harboestuary.org.

A Frequently Asked Questions brochure is also available on the website. To learn more about National Estuaries Day, visit www.estuaries.gov. For any further questions, contact the HEP Outreach Coordinator at 212-637-3816 or info@harboestuary.org.

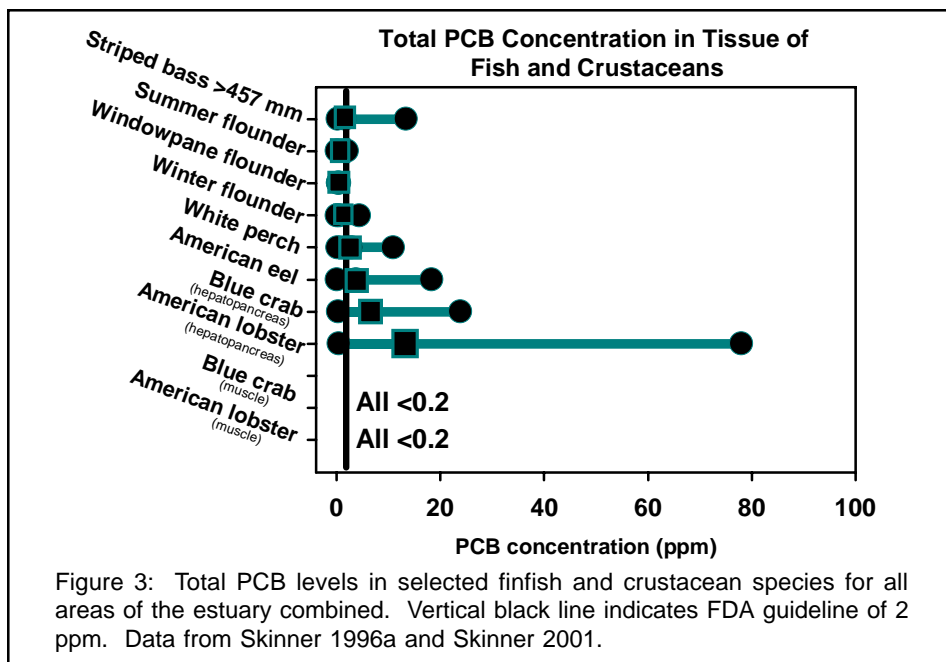


Figure 3: Total PCB levels in selected finfish and crustacean species for all areas of the estuary combined. Vertical black line indicates FDA guideline of 2 ppm. Data from Skinner 1996a and Skinner 2001.

Events: Past & Future

Save the Dates! March 21 & 22, 2003

The Harbor Estuary Program, US EPA, and the Ocean Conservancy will host a **Volunteer Estuary Monitoring Workshop** - details to come in the next issue of The Tidal Exchange.

• • • • •

On October 3 and 4, 2002, HEP cosponsored a Hudson River Environmental Society conference entitled, **Celebrating the Clean Water Act: 30 Years of Success in New York Harbor**. The conference highlighted the many accomplishments that have occurred in the past thirty year as a result of the passage of this landmark legislation. Speakers touched on the massive upgrades of infrastructure for waste water, industrial, and CSO control, and the resultant improvement in water quality and the return of many species of fish. Speakers also



John Waldman of the Hudson River Foundation speaking at the Clean Water Act Conference.

highlighted the need for future investment and maintenance so as to avoid losing ground on the improvements that have been made. An evening program at Pier 26 featured singer Pete Seeger and underwater videography from the Urban Divers.



Capt. Pete Says...

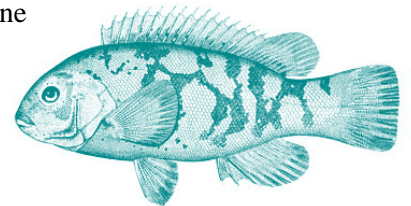
Baked Blackfish

Peter L. Sattler

Blackfish (*Tautoga onitis*) season opened in October. Actually, it never closed; the bag limit increased from 1 to 10-a-day, which sets the stage for a giant fish fry. This full-bodied fish is a tough fighter, a finicky eater and makes a delicious meal. This KISS recipe (Keep It Simple Stupid) can be prepared, cooked and on the table in less than 45 minutes!!

BAKED BLACKFISH

- 2 Fillets, skinless, boneless
- 2 Lemons, cut in slices & wedges
- 2Tbl Butter or margarine
- Paprika
- Salt/Pepper



- ♦ Rinse fillets in cold water, pat dry, place in baking dish
- ♦ Place butter and lemon slices on fillets, sprinkle with paprika, salt & pepper
- ♦ Place in preheated 350°F, bake for 30 minutes
- ♦ Serve with lemon wedges

I highly recommend spaghetti with oil & garlic as a go-along. A perfect wine for this fish is a Pinot Grigio served ice cold.

Would you like to **change** your address or **add** someone to our mailing list?

Provide changes or additions below, cut out or copy this section (include mailing label to the right so we can find you in our records) and mail to the Harbor Estuary Program Office, 290 Broadway, 24th Floor, New York, NY, 10007.



New York - New Jersey
Harbor Estuary Program

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