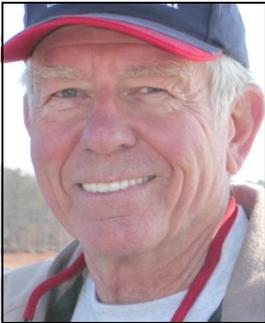


**Letter from the President, Herb Burnham**



In case you haven't heard, 2012 is the 50th anniversary of Hartwell Lake and promises to be filled with related events and activities. The Lake Hartwell Association has

been working with the Corps of Engineers and the Lake Hartwell Marketing Alliance over the past year to ensure that the history of this beautiful and valuable resource is told and celebrated. Beginning with this newsletter we will do our best to keep our members informed so they may actively participate. Knowing and appreciating history is always important and it helps us better understand opportunities and plan for the challenges of the future.

This is also a special year because it is an election year and it is our elected state and federal representatives that speak on our behalf regarding the funding of lake issues, such as water management studies for the Savannah River Basin. For example, phase 2 of the Comprehensive Basin Study has been on hold since 2006 due to lack of state funding. This is the phase of the study that, based on what was learned from droughts of record, will determine what changes are needed to better manage flows during drought

conditions. (See related article on page 3.) With Lake Hartwell Association's encouragement, several of our representatives are now actively exploring the possibility of having some of the revenues created by electrical power generation in the basin (\$60 million annually) returned to the two states. Currently the revenues go into the General Fund in Washington. In the case of the Hartwell Project, it amounts to approximately \$20 million a year. This has been the case for, you guessed it, 50 years. Since the water belongs to the citizens of South Carolina and Georgia, you would think it only fair that a reasonable share be returned to them to be reinvested in this most valuable resource.

In another article on page 4, you will read about an exciting new approach to the management of water... The Intelligent River®. The Clemson University team that has been working on this idea for years has been awarded a \$3 million grant to begin installing and testing instruments that will collect and transmit data related to water quality and quantity in the basin. This could eventually result in the 300+ miles of the Savannah River Basin becoming the most automated anywhere. The resources needed to reach that point will be huge, yet, well worth it because it promises the potential of applying best science, common sense and decades of experience to the real-time management of our precious water. Here, too, funding will be critical.

The issues noted above are only two examples of where our elected

*(Continued on page 2)*

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Lake Hartwell  
Association, Inc.  
P. O. Box 2122  
Anderson, SC  
29622  
(864) 224-LAKE

# President's Message

# Changes in the LHA Board of Directors

## OFFICERS & DIRECTORS

### Officers

Herb Burnham,  
*President*

Vacant,  
*Vice President*

Jim Bushey,  
*Treasurer*

Vacant,  
*Secretary*

### Directors & Committee Chairs

Dr. Marv Fralish  
*Legislative*

Cathy Foster,  
*Technical*

Dr. Larry Dyck,  
*CoveKeepers*

Pat Goran,  
*At-Large*

Don Haynie,  
*At-Large*

Scott Willett,  
*At-Large*

Janet Clayton,  
*Publications*

Ruth Anne  
Maciag,  
*Programs/  
Publicity*

Dan Ray,  
*Safety*

Vacant,  
*Membership*

Bruce Widener,  
*Design/Layout  
Editor*

*(Continued from page 1)*

representatives will need to work harder for funds to ensure our region continues to have an adequate supply of clean water. The first is an opportunity to solve a more immediate problem. The second is an opportunity to be part of something new, unique and state of the art. Imagine the positive impact that could have on our water quality and lake levels and, in turn, the region's economy.

**As members of a well-established and recognized grassroots organization, each having a personal interest in our lake's future, we can contribute by helping our association grow and become an even more effective voice at the state and federal levels. In the Fall Newsletter I challenged each of you to recruit at least one new member over the next 6 months. Many of you already have and the Association thanks you! Now that you know how easy it is and how good it feels, keep recruiting... we have room for everyone. For those who have not, please give it your best shot and let's build our collective strength "for the sake of the lake". PS: If you don't see the businesses you deal with on the Business Partners listed on page 15 in this newsletter, invite them to join. If they are on the list, be sure to thank them for their support during your next visit.**

Finally I and the Board of Directors want to extend best wishes to all of our fellow Lake Hartwell Association members and their families for a healthy, happy, and safe 2012!



The Lake Hartwell Association Board of Directors has asked Jill Miller to join the Board as Secretary. Ms. Miller has extensive experience in a variety of water based professions, including environmental consulting, regulatory compliance, water quality sampling and monitoring, aquaculture and watershed protection.

She currently is employed as the watershed protection specialist for South Carolina Rural Water Association, a non-profit public water and waste water technical assistance organization. She specializes in water resources protection, public education and outreach and stakeholder coordination and facilitation activities.

Jill, her husband, Brett, and their three children (Donovan 12, Reyna 6 and Vayden 4) currently live in Powdersville, SC.

**Please vote for  
Jill Miller via e-mail to:  
[mail@LakeHartwellAssociation.org](mailto:mail@LakeHartwellAssociation.org)**



Jill Miller

# Corps Gives Update on EA and Comp Study

*By Peggy O'Bryan, Chief, Operations Division  
U.S. Army Corps of Engineers Savannah District*

The U.S. Army Corps of Engineers releases water from the Hartwell, Richard B. Russell and J. Strom Thurmond reservoir system to meet upstream and downstream needs – drinking water, industrial uses, utilities, and the environmental and natural resource protection. These needs continue year round. Many thousands of people, dozens of industries, and some major utilities depend on a constant supply of water from the reservoirs. By law, downstream environmental needs must also be met. As a water resource management agency, the Corps seeks to balance upstream and downstream needs within the authorized purposes of the reservoirs.

The Savannah District is addressing potential modification of the drought contingency plan through an Environmental Assessment, and potential larger-scale modifications to the entire three-project system through the Savannah River Basin Comprehensive Study. Below are some updates on these topics:

## **Environmental Assessment:**

- The Corps began work in November 2011 on an Environmental Assessment (EA) to examine alternatives that would give the Savannah District greater flexibility in reducing outflows from the reservoir system in response to severe or prolonged drought conditions.
- The Draft EA is scheduled to be released for agency review and public comment in April 2012.
- The goal for completion is May 2012, which could allow the Corps to implement changes in June, depending on the recommended alternative and on project conditions.
- This EA would be in effect until it is superseded by subsequent evaluations, which would be produced by Phase II of the Savannah River Basin Comprehensive Study.

## **Savannah River Basin Comprehensive Study:**

The Savannah River Basin Comprehensive Study will examine extensive interactions of resources,

project purposes, and environmental and social aspects of the entire basin. This study is required to make changes to the drought plan that is outside of the Corps' existing authorities.

- Phase I was completed in 2006 at a cost of \$1.8 million. This phase included a water supply survey, a flow dataset and a computer model for the Savannah River Basin to show how changes to operations affect reservoir levels and downstream conditions. Phase I also included the 2006 EA that updated the Corps' 1989 Drought Contingency Plan for the Savannah River Basin. Phase I was crucial in updating the drought plan and reducing outflows earlier in drought at drought levels 1 and 2—keeping more water in the reservoirs while still meeting downstream needs.
- The Corps is working with the Georgia Department of Natural Resources (GADNR), the South Carolina Department of Natural Resources (SCDNR), and The Nature Conservancy (TNC) to develop the scope for Phase II of the Comprehensive Study and obtain the necessary funding to move forward. Estimated at \$1 million, shared 50-50 by the federal government and non-federal sponsors, this phase will focus on updates to the Drought Contingency Plan using data gathered during the last drought (2007-2009). This phase will not result in wide-sweeping changes to pool allocations or outflows; it will only consider drought operations.
- Currently, executing Phase II of the study is a high priority in the Savannah District's civil works program. The Corps is working hard to reach resolution with all parties involved who share the precious natural resources of the Savannah River Basin.

For more information on the Corps' management of the reservoirs, view the Frequently Asked Questions on the Savannah District website at: <http://www.sas.usace.army.mil/hydrodat.html>



## Intelligent River®

By Gene W. Eidson, Ph.D.

The Intelligent River®, a research program of Clemson University's Institute of Applied Ecology, seeks to transform the science and business of managing natural resources.

The Intelligent River®, developed by an interdisciplinary team, has the goal of creating a highly efficient and cost-effective real-time remote data acquisition system to observe unprecedented amounts of data. The most ambitious project is to create the world's first "automated river". In 2011, the National Science Foundation awarded the team a Major Research Instrumentation Award to deploy the Intelligent River® instrument along the 312-mile Savannah River — from the headwaters in North Carolina to the port in Savannah. The instrument will collect water quality and quantity data and aggregate data from many sources into one functional database that will populate river operational models. At the center of the Intelligent River® technology is a novel patent-pending networking platform called a "MoteStack" which collects, stores, and transmits data at a scale that until now was cost-prohibitive. The data is critically needed to improve water resources management as demand increases for drinking water, hydroelectric power, recreation and industrial production.

The grant announcement on the NSF website reads: "It is evident that the growing mismatch between water supply and demand impacts us all: USA watersheds are in peril! This project does something about it with support from EPA and USACE (U.S. Army Corps of Engineers). Within the reach of environmental science, this work explores the connections among land use, energy production, climate effects and water resources applying information and computing systems." James D. Giattina, EPA Region 4 water protection division director, said, "The proposed watershed-scale monitoring instrument will directly enhance our efforts to monitor water quality and manage watershed factors that impact water quality in real time. This constitutes a critical innovation as our waters face increasing pressures from drought, development and emerging pollutants."

"The technologies being developed will enable us to more adaptively manage the river by optimizing water resource allocation while minimizing impacts on the environment," said Col. Edward Kertis, former commander of the U.S. Army Corps of Engineers Savannah District. "We will be able to refine our releases based on changes in water quality, ecosystem functionality, habitat availability and human effects. The new generation of data-collection platforms could potentially be adopted by every Corps of Engineers water-management office across the country."

Upon installation in Savannah River, the Intelligent River® software and hardware architecture will provide 24/7 access to data from sensor networks measuring a wide variety of environmental parameters. The program web site, [www.intelligentriver.org](http://www.intelligentriver.org), will provide online tools and be accessible with a mobile device. Installation will begin in 2012 and be completed in 2013.

Dr. Gene W. Eidson, Ph.D. is the Director of the Institute of Applied Ecology Center for Watershed Excellence at the Baruch Institute of Coastal Ecology & Forest Science at Clemson University

## Water 'n Wildlife Day Lake Hartwell & the Clemson Experimental Forest Saturday, March 31, 2012; 10 am - 2 pm

### Protect Water Quality and Wildlife Habitat

- \*Wildlife restoration projects on the Lake Hartwell shoreline
- \*Picnic lunch & speakers at Twin Lakes Recreation Area
- \*Guided hikes on the Clemson University Experimental Forest trails

Visit the LHA website and watch your email for more news on this event. <http://www.lakehartwellassociation.org>

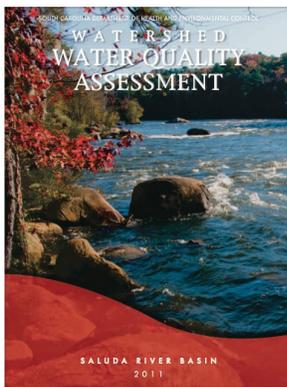


## Watershed Water Quality Assessments - SC DHEC

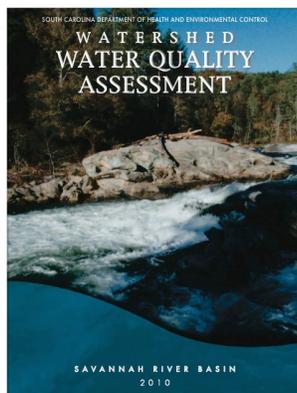
*Submitted by the LHA Technical Committee*

The update to the Watershed Water Quality Assessment (WWQA) report for the Saluda River Basin, our neighboring watershed to the east, has been released by the South Carolina Department of Health and Environmental Control (SC DHEC). The update to the Savannah River Basin was released in 2010.

### Saluda River Basin



### Savannah River Basin



These reports include water chemistry and biological monitoring information, physical characteristics, natural resources, growth potential, nonpoint pollution sources, and point source discharges presented through text and maps. You can download these publications from the DHEC website:

<http://www.scdhec.gov/environment/water/shed/>

## Hartwell Project 50th Anniversary Celebration

*By Col. Jeff Hall, Commander,  
USACE Savannah District*

On behalf of the entire team at the U.S. Army Corps of Engineers, Savannah District, I look forward to celebrating the 50-year anniversary of the construction of the Hartwell Dam and Lake Project with you this year.

It was April 27, 1962 when the Hartwell Power Plant generated and put on-line the first electricity from the new hydroelectric facility. To commemorate this historic event, the U.S. Army Corps of Engineers, Savannah District is partnering with various area organizations to plan special activities throughout the 2012 year.

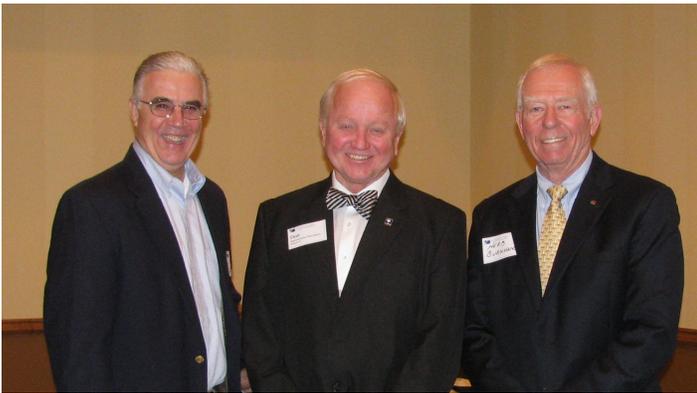
The Lake Hartwell Association, Lake Hartwell Marketing Alliance and the Southeastern Power Association are very involved in the planning process and will play key roles for various celebration events throughout the year. There will be an exciting commemoration ceremony on April 27, 2012 with invitations being extended to individuals who had a part in constructing the facility, those who have played key project operational roles throughout the years, and various community stakeholders and elected officials from all levels of government. Other events will include historical programs, a fish tag and release event, and a special 50th Anniversary "Best Dam Run," among other activities.

I invite you to visit our 50th Anniversary webpage at <http://www.sas.usace.army.mil>. On this webpage, you can see event schedules as they are posted, learn more about Hartwell Lake's history, and view historical photographs of the Hartwell Project construction. Check the website frequently and watch for event announcements on the site as well as through local media outlets.



## Annual Anderson County Legislative Breakfast

Representatives from the Lake Hartwell Association attended the annual Anderson County Legislative Delegation breakfast meeting on January 5, 2012. Several of the topics that were discussed by the delegation included Lake Hartwell and Savannah River Basin issues.



*Pictured left to right*

Mike Massey

Rep. Don Bowen – SC House of Representatives

Herb Burnham



Breakfast meeting Jan. 2012

*Pictured left to right*

Scott Willett – LHA Board of Directors and Anderson Regional Joint Water System Executive Director

Sen. Kevin Bryant - South Carolina Senator District 3

Mike Massey - LHA Member and Savannah River Basin

Advisory Council Co-Chair

Herb Burnham - LHA President

## Georgia EPD Adopts Regional Water Plan

*By Pat Goran*

The Savannah - Upper Ogeechee Regional Water Planning Council was recently notified that the water plan they had submitted has been adopted by the Georgia's Environmental Protection Division (EPD). The letter of notification stated that the plan is consistent with the rules for regional water planning and the guidance adopted pursuant to those rules. EPD also stated that they will use the plan to guide future water permitting decisions.

The following is a question that is frequently asked regarding the adoption of the regional water plan, along with EPD's response.

### **How will the adopted regional water plans be implemented?**

Implementation of regional plans will occur through the following steps:

- Local and regional water users with the ability to develop water infrastructure and apply for permits, grants and loans will implement management practices based upon the menu-oriented, sequential approach outlined in the regional water plans. Short-term practices that address immediate resource needs are emphasized, with more complex or expensive practices to be evaluated for subsequent implementation if warranted.
- EPD will use the regional water plans to guide water permitting decisions and non-regulatory activities in the context of the full existing framework of laws, rules and guidance. (Information on individual laws and rules can be found at [www.gaepd.org/Documents/rules.html](http://www.gaepd.org/Documents/rules.html). Guidance documents in use by EPD's Watershed Protection Branch can be accessed at [www.gaepd.org/Documents/techguide\\_wpb.html](http://www.gaepd.org/Documents/techguide_wpb.html).)
- EPD will coordinate with our State agency partners and will consult with the Councils and interested parties to set priorities for recommended actions. EPD will continue working to improve the information base for regional water planning and water management.
- In the interim between adoption of the 2011 regional water plans and the five-year review and revision required by the State Water Plan, EPD is committed to supporting and tracking implementation of the plans and to continued engagement with the Water Planning Councils, as envisioned in the adopted plans and as resources allow. As an important near-term step, EPD supports the Councils' recommendations that the State identify and secure funding and other resources necessary for continuing regional water planning.

The full plan can be reviewed at [http://www.georgiawaterplanning.org/documents/SUO\\_Adopted\\_RWP.pdf](http://www.georgiawaterplanning.org/documents/SUO_Adopted_RWP.pdf)

# Building HARTWELL DAM AND LAKE




Nov. 20, 1957 Aerial view downstream. Seneca River on the left and Tugaloo River on the right.



Oct. 12, 1960 Aerial view from Georgia Embankment—Power Plant area.



Nov. 22, 1955 Aerial view of Savannah River looking downstream. Dam site is where the larger island is



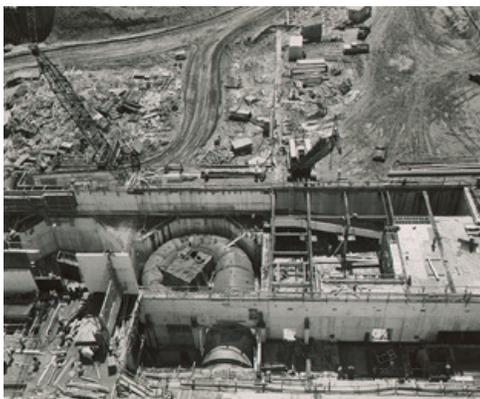
July 31, 1962 Upstream aerial view from SC side. Res. Elev. 659.54 ft msl.



May 24, 1961 Filling of reservoir has begun



July 26, 1961 Georgia Embankment—Power plant area from Georgia viewing stand



May 12, 1961 Power Plant area. Penstock—spiral case.

**Construction of the Hartwell Project took place from 1955 to 1962. April 27, 1962 is the day that the first generator went on line and produced power. 2012 celebrates 50 years!**

*All photos are courtesy of The Army Corps of Engineers.*



Nov. 20, 1957 Aerial view downstream. Seneca River on the left and Tugaloo River on the right. Savannah River is the Boundary line.

*If you would like to read more about the construction of the Dam, visit the Corps website at: [www.sas.usace.army.mil/50/](http://www.sas.usace.army.mil/50/)*

## LHMA Projects 50th Anniversary Celebration Activities

The Lake Hartwell Marketing Alliance (LHMA) was established to promote Lake Hartwell and includes representatives from: each Chamber of Commerce in the six counties that encompass Lake Hartwell; Parks, Recreation and Tourism Departments; and Convention and Visitor Bureaus, just to mention a few.

In celebration of the 50th anniversary of the Hartwell Dam and Lake Project, the LHMA is acting as an umbrella for all of the fine entities that are combining efforts to make 2012 a memorable, meaningful year of celebration. According to their director, Larry Torrence, they have enlisted the commitment of most of the media sources around the Lake and will be funneling details for upcoming events to these partners as details are confirmed. Mr. Torrence stated that the 50th Anniversary Steering Committee intends to structure the year's festivities to include two signature events (one per state), six major events (one per county) and then a series of sanctioned events. Listed below is the current list of the LHMA's projected activities:

### Some of the confirmed events include:

A historical art exhibit composed of photography, documents and memorabilia from the period encompassing the preparation, building and use of the Lake and Dam.

The design and construction of two memorial markers which will house time capsules to be placed on each end of the earthen portions of the Dam.

The Hartwell Project/DNR Fish Tag in which 50 fish with 50th anniversary tags will be released by the Corps. A catch will earn the

fisherman an award and a gift certificate for sporting goods.

The Corps' "invitation only" commemoration for workers, elected officials and USACE brass to be held on Friday, April 27th

The public celebration scheduled for Big Oaks on Saturday, April 28th. This celebration will include a parade of the trades, entertainment, a public parade of lights at dusk.

**There are MANY more events/activities in the works.** For further information on upcoming events go to [www.MyLakeHartwell.org](http://www.MyLakeHartwell.org)

For more information on how you can become a part of this initiative, contact Larry Torrence at [LJT@hartcom.net](mailto:LJT@hartcom.net)



### LHA Mission Statement

**We** will develop and establish the Lake Hartwell Association as an organization that promotes and encourages cooperation, assistance and information exchange among those concerned with Hartwell Lake and the Savannah River Basin.

**We** will provide a forum to collectively represent our membership on issues that pertain to the development, preservation and comprehensive management of Hartwell Lake.

**We** will collect and distribute information on matters affecting Hartwell Lake.

**We** will maintain liaisons and communications between the Lake Hartwell Association and educational, governmental, scientific and other communities.

## Lakeshore Stewardship - The Clemson Experimental Forest Model

### LHA CoveKeepers and Technical Committee Forum

**WHO:** Current CoveKeepers and Technical Committee members and anyone interested in learning about the interface between Hartwell Lake and the Clemson forest

**WHERE:** Anderson County Museum

**WHEN:** Tuesday, February 7, 2012 AT 6:30 p.m.

#### AGENDA:

\*Speakers: Ben Sill and John Garton, Clemson University  
Experimental Forest

\*Water n' Wildlife Day Planning

\*Covekeepers Team Meetings

The LHA CoveKeepers and Technical Committee will learn about the Clemson Experimental Forest and how they can help at the Water n' Wildlife Day which will be held at the Clemson Forest and Twin Lakes Recreation Area. Help is needed for a shoreline survey as well as other lakeshore restoration projects. Covekeeper teams will also meet with their River Captains to discuss specifics of their coves and shorelines.

Our speakers will be Ben Sill, Professor Emeritus, Civil Engineering, and John Garton, retired Duke Energy biologist, both Clemson Forest naturalists. The 17,500-acre experimental forest, the largest such forest in the nation adjacent to a university campus, not only provides habitat and recreation, but also provides a natural buffer that protects the water quality of Lake Hartwell.

### Lake Hartwell CoveKeeper Project

The Lake Hartwell Association continues a volunteer lake maintenance program called the CoveKeeper Project. The mission is to be good neighbors and to promote good lake stewardship. The CoveKeepers won the Litter Pride Award in 2010, from Keep America Beautiful of Anderson County.

Volunteers are asked to participate in the following ways;

- survey annually a segment of the shoreline
- act like a neighborhood watch regarding the lake

Volunteers will receive training to assist in the following;

- helping to educate lake residents on practices that protect the lake
- providing knowledge on types of planting buffers that prevent fertilizer and other chemicals from washing down lawns and into the water

A special thanks to the LHA Technical Committee and CoveKeepers, and we look forward to seeing you on February

## Hartwell Lake Clean-Up Wrap-Up

The Corps of Engineers Hartwell Lake Office, in partnership with the Lake Hartwell Association, hosted the annual Hartwell Lake Clean-Up Campaign from August 15 until September 24, 2011. This annual campaign began more than 30 years ago and is part of the National Public Lands Day, Georgia's statewide Rivers Alive, and South Carolina's statewide Beach Sweep River Sweep programs.

### Year 2011 Results:

- 2100 pounds of litter collected
- 512 total participants
- Approximately 92 miles of shoreline cleaned up
- Most common item collected - aluminum beverage can
- Most interesting item collected - push lawn mower

### Time it takes for litter to decompose in the environment:

Orange or banana peel (2-5 weeks)

Newspaper (6 weeks)

Cigarette filter (up to 5 years)

Aluminum can (80-200 years)

Plastic bottle (450 years)

Monofilament fishing line (600 years)

Glass bottle (1 million years)

Styrofoam container (1 million years)

Sources: U.S. National Park Service; Mote Marine Lab, Sarasota, FL and "Garbage In, Garbage Out," Audubon magazine, Sept/Oct 1998.

Keeping litter out of Lake Hartwell and its watershed not only preserves the beauty of the lake, but also protects water quality and wildlife.

**Thanks to all participants! Start planning for the 2012 Clean-Up!**

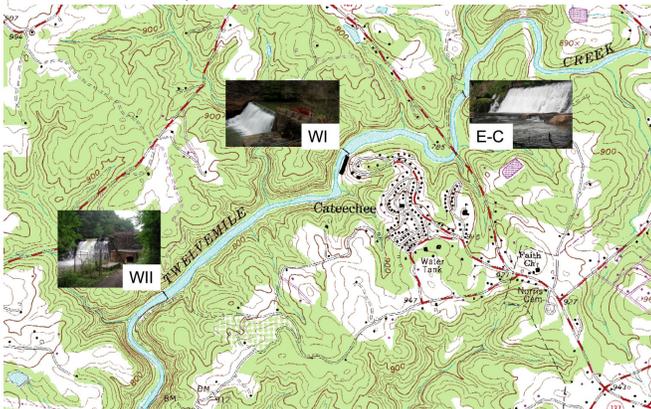
# New Studies of Toxic PCB-Contamination by EPA

By Dr. Larry Dyck

EPA has scheduled a Supplemental Remedial Investigation to evaluate how much toxic PCB resides within the bank-sediments of the Twelve Mile River. The study will evaluate the river floodplains that were sliced open when the river channel was excavated in order to remove two historic mill-dams (the Woodside dams near

Twelve Mile River Gorge near Cateechee

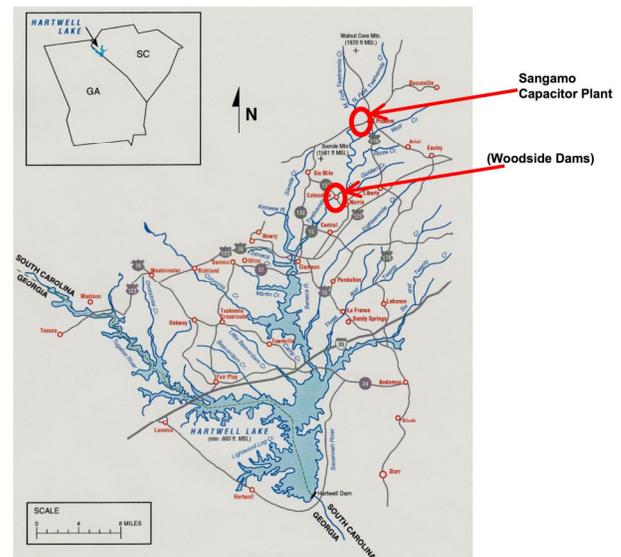
WI (Woodside II) and WI (Woodside I) Dams have been removed, E-C (Easley Central Water District ) Dam remains



Cateechee, SC). Removal of these dams was part of an ecological project to compensate “the people” for damages to the Twelve Mile River and Lake Hartwell imparted by toxic PCBs. Schlumberger Technology, the party responsible for PCB contamination (after they purchased the Pickens, SC based Sangamo Capacitor plant), performed and fully paid for this project. The project was negotiated between State and Federal Resource Agencies and Schlumberger and agreed to in a Consent Decree signed by the Federal Court in 2006.

According to the Consent Decree, removal of the two dams will ultimately accelerate the delivery of clean sediment into Lake Hartwell where it is expected to bury PCBs on the lake bottom. (Note however, one more dam, owned by the Easley Central Water District must be removed for sediment to move freely downstream into Lake Hartwell.) The most contaminated lake sediments are in the Twelve Mile arm of Lake Hartwell, upstream of the U.S. 123 Bridge in Clemson, SC.

Because EPA was not a Trustee (legal party to the Consent Decree), they did not get involved in the oversight of the dam removal projects but, after project completion, they initiated action in response to concerns expressed by residents and local groups. EPA became interested after several organizations, including the Lake Hartwell Association, detected oily layers left behind in the floodplain sediments. Upon laboratory analysis these layers were found to



contain 50 times more PCB than is allowable on private land. Subsequently, Pickens County performed additional sampling and analysis and found floodplain sediments were as much as 170 times more contaminated than is allowable. These facts led to the current response by EPA after the Consent Decree based ecological project was completed.

EPA will perform two studies over the winter and spring of 2012. The first is a “Supplemental Remedial Investigation.” The original Remedial Investigation evaluated contamination within the entire system in order to establish a clean-up strategy which was formulated in the Record of Decision (1994). The second study is a “Risk Assessment.” The latter will look at statistical models that have been developed over many years

(Continued on page 11)

*(Continued from page 10)*

and estimate the risk to humans exposed to various levels of sediment contamination. The Risk Assessment will focus on a recreational population, those individuals who would be exposed to sediments through paddling the river, fishing and picnicking or playing along the river. The Risk Assessment evaluates the impacts on both adults and children.

Craig Zeller, the EPA project manager for Lake Hartwell and the Twelve Mile River, presented the study concept at a public meeting in early December 2011. At that meeting he indicated that he does not expect the risk to humans to be significant because the toxic pathway of PCBs in people is through ingestion not through dermal (skin) contact. People must eat the PCBs to be exposed to significant risk. The likelihood of people, even children, eating sediment is extraordinarily low... so perhaps we should go into this analysis as optimists.

On the other hand, we should understand the full scope of Zeller's comments. Human health risk requires the consumption of contamination, which means humans must consume contaminated fish. With this in mind, we are left with some serious unanswered questions: What happens to the PCBs in floodplains when the banks progressively erode into the water? Will the PCBs moving downstream into Lake Hartwell become incorporated to the aquatic food web? Will this lead to fish with more contaminated tissues? Will it lead to a longer duration of contamination in fish populations? Will it extend the time that a Fish Consumption Advisory (Don't Eat the Fish) remains in effect? These and many other

questions still need to be asked.

On the positive side, a part of the EPA study includes a two-dimensional sediment transport study performed by staff at Corps of Engineers' "Waterways Experiment Station." This study should reveal how much and how far sediment of different size classes (sand, silt, clay) moves into Lake Hartwell from the Twelve Mile River. With this in mind, we can anticipate that where the finer particles are deposited is where PCBs will be deposited. Determination of areas of increased contamination offers the potential to follow-up with remedial actions such as capping.

Finally, I am struck with the major difference between work that has been performed on the Hudson River in New York and that scheduled for Twelve Mile River in South Carolina. Go onto the Hudson River website and have a look. [http://www.epa.gov/hudson/Floodplains\\_Factsheet\\_5-2011.pdf](http://www.epa.gov/hudson/Floodplains_Factsheet_5-2011.pdf)

You will find an open and learned discussion between EPA and property owners and users of the Hudson River and its shoreline about PCBs and their mitigation. You will see that EPA is performing remediation in areas that have levels of contamination equivalent to our floodplains. You will also see that EPA offers advice to property owners on what they might do to protect themselves and their loved ones when exposed to contaminated sediment. I do not see any advice EPA offers to property owners along the Twelve Mile River and the contaminated regions of Lake Hartwell other than "Don't Eat the Fish."



Too dark layers in floodplains contain high PCB concentration.

# The Lake Hartwell Association Annual Meeting and Forum: Celebrating the 50th Anniversary of Hartwell Dam and Lake

*By Ruth Anne Maciag*

## A HISTORY LESSON

The Lake Hartwell Association held its Annual Meeting and Forum on October 27, 2011, at the Anderson Civic Center. Because 2012 is the official 50th year anniversary of the Hartwell Project, LHA kicked off a year of celebratory activities with a presentation of the history of the building/creation of the dam and lake.



Col. Hall and Larry Torrence, LHMA

David Coughlin, historian and author of "Lake Sidney Lanier – A Storybook Site," gave an overview of the three rivers, Tugaloo, Seneca and Savannah, the way they appeared before the Project, some of the engineering involved in the building of the dam, and the resulting Lake Hartwell as it is today.



Attendees listening to the speaker



Col. Jeffrey Hall

Coughlin has spent ten years researching the development of the Hartwell Project, cataloging thousands of photos that reside in the Corps' archives, and is in



David Coughlin

the process of writing a book on the subject. He showed a progression of slides depicting exactly how and where the water was diverted while various sections of the dam were constructed. He also shared old aerial photos taken at different times of the

"small" streams that became the large Hartwell Lake. David's narrative was casual and included several anecdotes of the human side of this very large construction project. He will be doing another presentation on the Hartwell Project at the Anderson Museum in April.

The official opening of the Hartwell Dam was April 27, 1962 which is when the first generator went on line. The celebration of the 50th anniversary will include a wide variety of activities during the entire year of 2012, but the major concentration of festivities will be the weekend of April 28, 2012.

The second speaker at the Annual Meeting was Col. Jeffrey Hall, of the Corps of Engineers, accompanied by George Bramlette, the new Corps Hartwell Project Manager, and other COE specialists.



Viewing Dam Construction

Col. Hall and his team presented their accomplishments during the recent past and plans for future study. There was a lively and extended Question-Answer period following Hall's presentation. Lake property owners particularly were not shy



Anderson County Sheriff John Skipper, Pat Goran LHA, Rep. Don Bowen

a b o u t questions, most of which had to do with the lake level, rainfall, the lake level, power generation, the lake level... and the lake level.



## What to do about Pet Waste?

Fido can leave a mess on the ground. Though picking up after your pet may not be something you like to do, it is something you should do. After all, the bacteria in your pet's waste runs down from the yard to the street and drainage ditch and out to the waterways that we use for drinking, fishing, and swimming. This runoff is known as stormwater, and it does not get treated before flowing into your local waterbodies. This bacteria that becomes part of stormwater can create hazardous conditions in the waterways that we love and enjoy.



The truth of the matter is that **having two dogs in the yard and not picking up after them, is the same as having three adults in the yard. And, that's just gross!**

So, there are three things that you as a pet owner can do to prevent your dogs from adding pollution to your local waterbodies.

1. Pick up after your pet and flush it down the toilet, where it will be treated by your wastewater treatment plant or septic system.
2. Bag your pet's waste and put it out in the trash. Though, the waste is still going to a landfill and not being treated, it is being removed from causing harm to local waterways.
3. Purchase or build a homemade doggie-loo, basically a pet waste septic system. This should be located away from water sources, floodplains, and high traffic areas. To find out more, check [www.clemson.edu/carolinaclear](http://www.clemson.edu/carolinaclear).

Not picking up after your pet is not only illegal in some communities, it's taking for granted the precious resources that South Carolina is so fortunate to have... rivers, lakes, and oceans to enjoy!



Remember to speak with your local officials about where pet waste pick up stations are needed in your community. Become a solution to stormwater pollution!



*Stormwater Education*

*Because We All Live Downstream...*



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## LHA Membership: Welcome Aboard & Thank You!



In these challenging economic times, we are especially grateful to all the LHA member families and businesses that support our efforts to protect the beauty and value of Lake Hartwell. Please join us in welcoming the members who have joined since the last newsletter.

### New Family Memberships

- |                                |                                      |                             |                               |
|--------------------------------|--------------------------------------|-----------------------------|-------------------------------|
| • Rep. Paul Agnew              | • Joe DiCesare,                      | Hughes,                     | • Marvin Owings,              |
| • Jim & Joanmarie Bolding,     | • Steve Dickinson,                   | • Lisa Janik,               | • Mr. & Mrs. William Pickens, |
| • Rep. Don Bowen               | • David Dumin,                       | • Patrick & Sheila Kuhlman, | • Mike Rapp,                  |
| • Brian Bowling,               | • James A. Elks,                     | • Doug & Sylvia Lavender,   | • Raymond & Susan Reynolds,   |
| • Jan & Lockie Brown,          | • Kathleen Banks Everett,            | • David Lowery,             | • Kay & John Sansom,          |
| • Bob Byers,                   | • Sharon Fields,                     | • Mr. & Mrs. John Maddox,   | • Taze L. Senn,               |
| • Sen. Kevin Bryant            | • L. S. Fowler, Von & Evelyn Gibson, | • Samuel A. Martin,         | • Andrea Shook,               |
| • Nick & Lucy Cascio,          | • Bonnie Golden,                     | • Norman McLean,            | • Bill & Evan Sowers,         |
| • C. Dobb Chapman,             | • Edward Harms,                      | • Donald J. Meriam,         | • Jerry & Julie Strauss,      |
| • Thurston Cofer,              | • James Honrine,                     | • Anthony Mellow,           | • Drew Visioli,               |
| • Richard D. & Anne M. Cupell, | • Don & Susan Howell,                | • Vernon Mullins,           | • John Wesley                 |
|                                | • Mr. & Mrs. Brian D.                | • David Naser, Ryan Neily,  |                               |

### New Community/Business Memberships

- Currahee Club - Andrew Ward
- Floatair Boatlifts, Greenville, SC – R. J. Foster
- Tugaloo Property Owners, Lavonia, GA – R. Grimm

### Special Donations

We also wish to thank the following LHA members whose generous special donations give additional encouragement, and much needed support, to the LHA volunteers.

- |                             |                               |                               |
|-----------------------------|-------------------------------|-------------------------------|
| ◆ Robert & Patricia Jordan, | ◆ Mack & Mary Lynn Eberhart,  | ◆ Richard & Anne Marie Monge, |
| ◆ James T. Bost,            | ◆ Mark & Martha Fair,         | ◆ Jim & Susan Montgomery,     |
| ◆ Dr. & Mrs. John M. Bowen, | ◆ Mr. & Mrs. Joseph Fineza,   | ◆ Royce & Joan Shafter,       |
| ◆ Harry D. Brooks,          | ◆ Richard & Jan Heithaus,     | ◆ Jerry & Julie Strauss,      |
| ◆ Fred & Beth Burdick,      | ◆ Robert & Sandra Hultslander | ◆ Robert & Cindy Weigle,      |
| ◆ Dale Carlson,             | ◆ Jacques & Linda Macy,       | ◆ Dorothy S. Williams.        |
| ◆ Steve Denman,             | ◆ Jane S. Martin,             |                               |

Welcome aboard & thank you all for your ongoing support  
 “For The Sake Of The Lake

## LHA COMMUNITY & BUSINESS PARTNERS

Please join us in thanking the Community and Business members that generously support LHA!  
Their business contact information and website links are available on the LHA website!



- American Services, Inc. of Greenville, SC - Henry Harrison (864) 292-7450
- Anderson Regional Joint Water System - Scott Willett (864) 231-5987
- Andrew Adams, DDS (864) 226-6278
- Big Water Marina - Jane W. Davis (864) 226-3339
- Bill Brissey Real Estate - Bill Brissey (864) 226-7380
- Billy Howell Ford Lincoln Mercury - Billy Howell (770) 887-2311
- Brysan Utility Contractors, Inc. - Christopher Barber (770) 985-4606
- Byers Precision Fabricators - Roger Byers (828) 693-4088
- C. Dan Joyner Company - C. Dan Joyner (864) 242-6650
- Carola Dauchert Real Estate LLC - Carola Dauchert (864) 226-5473
- Carolina WaterSports - Chad Hodges (864) 332-0090
- Central Irrigation Supply - Idral Bowen (914) 347-5656
- Chickasaw Point Property Owners Association (864) 972-3680
- Clearwater Shores Community - Gary Bruce (864) 304-3656
- Coldwell Banker Fort Realty - Fort Oglesby (888) 409-5054
- Collins Dock, Inc. - Tammy Collins Smith (864) 225-2881
- Connie & Robert Banks
- **Currahee Club - Andrew Ward (706) 827-1700\***
- Custom Dock Systems - Don Haynie (864) 225-2393
- Diamond T Promotional Gear - Derek Burnette (864) 972-0690
- Docks South, LLC - Bill Griggs (770) 377-3625
- Eric Nilsson
- **Floatair Boatlifts, Greenville, SC - R. J. Foster (864) 467-1806\***
- Grady's Great Outdoors - John Phillips (864) 226-5283
- Greg Collins
- Hartwell Lake News - Angie Wilson (864) 934-3952
- Hartwell Marina & Boat Sales - Brant Tew (706) 376-5441
- Jerilyn Wiech - Keller-Williams Lanier Partners (706) 244-8211
- Kroeger Marine Construction, Inc - Dave Kroeger (864) 882-7671
- Lake Hartwell Sail & Power Squadron - Bert Baxter (864) 601-1660
- Lakeside Chiropractic, LLC - Dr. Cindy Pradhan, DC (864) 224-7660
- Lee's Marine LLC - Randy Lee (864) 224-0123
- Marine Specialties, Inc. – Grant Wood (864) 287-5880
- Matthew Nasrallah, Attorney-at-Law (877) 266-3694
- Mike & Sherry Hayes
- Mike Sanders Boat Storage - Michael W Sanders (864) 231-0010
- New Harbor Light Marina - Larry Rich (706) 356-4119
- Palmetto Lakeside Services (864) 933-0707
- Paradise Point Inc - William Roberts (404) 261-5003
- Paul & Susan Meng
- Phil Jewelers - Phil Silverstein (864) 226-7635
- Pintail Point Property Owners Assn. - Sheree Moate (864) 622-2265
- PIP Printing - Ovid Culler (864) 225-1471
- Portman Marina - Dave Freeman (864) 287-3211
- Strickland Marine Center - Dave Strickland (864)225-0145
- Swaney's Point Association - Danny Shook (828) 242-1612
- Tom Miller Keller-Williams Lanier Partners (678) 469-9917
- T N Construction - Thad Strickland (864) 574-2113
- **Tugaloo Property Owners, Lavonia, GA - R. Grimm \***
- The Hartwell Sun - Robert Rider (706) 376-8025
- Upstate Forever - Brad Wyche (864) 250-0500
- US Army Corps of Engineers Hartwell Dam & Lake Project (706) 856-0300
- View Point Lot Owners Association (770) 814-0963
- Water Education and Environmental Center (WECC) - Charlie Gibson (864) 844-1179
- Watermark Realty Company – Patricia Rowland (706) 356-2121
- William M. Callahan, DDS (864) 647-9000

\*New members

**Thanks for YOUR Support!**



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## LAKE HARTWELL ASSOCIATION

P.O. Box 2122, Anderson, SC 29622



# Membership Application

*Winter*  
**2012**

Good news! Joining LHA and renewing your membership just got easier! You may mail this Membership Application form with your check to LHA at the above address, or visit the LHA website (see above) to make a secure credit card payment!

### Membership Information: Check all that apply

- New     Renewal     Address change    Amount Paid \$ \_\_\_\_\_ Date \_\_\_\_\_
- Family \$25     Community, Association or Business \$100
- Gift Membership     Additional Donation \$ \_\_\_\_\_

Name \_\_\_\_\_

Spouse's Name *(If Family Membership)* \_\_\_\_\_

Mailing Address \_\_\_\_\_

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

Phone (H) \_\_\_\_\_ (W) \_\_\_\_\_ (Cell) \_\_\_\_\_

E-Mail \_\_\_\_\_

Occupation(s): Yours \_\_\_\_\_ Spouse's \_\_\_\_\_  
*(If retired, check here  and give former occupations above)*

Lake Address \_\_\_\_\_ County \_\_\_\_\_  
 (\*or Gift Recipient's address) \_\_\_\_\_

**Pay by Check:** Make checks payable to **Lake Hartwell Association, Inc.**  
 Send to address above.

### Give Something Back To The Lake.

Please select committees on which you would be willing to serve.

- Legislative
- Program
- Financial
- Lake Cleanup
- Safety
- Technical
- Membership
- Publications
- Covekeepers
- Other